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ABSTRACT

Exercises from the National Assessment of Educational Progress (NAEP) third mathematics assessment are provided in this released exercise set. Exercises were administered to 9-year-olds, 13-year-olds, and 17-year-olds. Some exercises were administered to only one age group, others to two or more age groups. The set is divided into two parts: text and appendices. Part 1 of the text briefly explains NAEP's assessment procedures and describes the documentation provided for the various kinds of exercises in the set. Part 2 describes rationales behind the development of attitudinal and experience questions. Part 3 describes the taxonomic and content classifications used to develop and report on cognitive exercises for the assessment. (Only about one-fourth of these exercises have been released since NAEP will readminister the others in the future to determine whether the performance level of young Americans has changed.) The remainder of the set consists of copies of the released exercises and documentation for each exercise. Documentation includes reference numbers, content/process objectives, timing/administration data for each group, and sorting guides for open-ended items. Attitudinal and experience exercises make up appendix A, followed by cognitive exercises in appendix B, and data for cognitive exercises in appendix C. (JN)

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NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

MATHEMATICS

RELEASED EXERCISES FROM THE 1981-82 ASSESSMENT

Education Commission of the States

July 1983

NIE Grant - NIE-G-80-0003

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FORWARD

When the U.S. Office of Education was chartered in 1867, one charge to its commissioners was to determine the nation's progress in education. The National Assessment of Educational Progress (NAEP) was initiated a century later to address, in a systematic way, that charge.

Each year since 1969, National Assessment has gathered information about levels of educational achievement across the country and reported its findings to the nation. NAEP surveys the education attainments of 9-year-olds, 13-year-olds, 17-year-olds and young adults, ages 26-35, in ten learning areas: art, career and occupational development, citizenship, literature, mathematics, music, reading, science, social studies and writing. Different learning areas are assessed every year, and all areas are periodically reassessed in order to measure possible changes in education achievement. National Assessment has interviewed and tested more than a million young Americans since 1969.

Learning-area assessments evolve from a consensus process. Each assessment is the product of several years of work by a great many educators, scholars and lay persons from all over the nation. Initially, these people design objectives for each subject area, proposing general goals they feel Americans should be achieving in the course of their education. After careful reviews, these objectives are given to exercise (item) writers, whose task it is to create measurement tools appropriate to the objectives.

When the exercises have passed extensive reviews by subject-matter specialists, measurement experts and lay persons, they are administered to probability samples. The people who compose these samples are chosen in such a way that the results of their assessment can be generalized to an entire national population. That is, on the basis of the performance of about 2,000 9-year-olds on a given exercise, we can make generalizations about the probable performance of all 9-year-olds in the nation.

After assessment data have been collected, scored and analyzed, National Assessment publishes reports to disseminate the results as widely as possible. Not all exercises are released for publication. Because NAEP will readminister some of the same exercises in the future to determine whether the performance level of Americans has increased, remained stable or decreased, it is essential that they not be released in order to preserve the integrity of the study.

INTRODUCTION

The purpose of this released exercise set is to provide easy access to released exercises from the National Assessment of Educational Progress (NAEP) third mathematics assessment, conducted in 1981-82. Exercises and documentation are in loose-leaf format to facilitate sorting and copying. These released exercises are in the public domain; therefore, there are no restrictions on copying or using the exercises in this booklet. Documentation has been kept to a minimum. It includes basic reference numbers, objective classifications National Assessment has found useful, timing and administration data for each age group, and scoring guides for open-ended items.

Detailed achievement data on group performance or changes in performance from previous assessments are not included in this report; they will be published in other reports. Similarly, detailed documentation of the objectives and development process is not included, but is being published concurrently in Mathematics Objectives, 1981-82 Assessment (1981) available from National Assessment.

Exercises were administered to 9-year-olds, 13-year-olds and 17-year-olds. Some exercises were administered to only one age group, others to two or more age groups. The number of released cognitive (knowledge, skills, etc.) and affective (attitudinal) exercises for each age group or combination of age groups is shown in Exhibit 1.

Part 1 of the text briefly explains NAEP's assessment procedures and describes the documentation provided for the various kinds of exercises in the set.

Part 2 describes rationales behind the development of the attitudinal and experience questions for the 1981-82 mathematics assessment. The entire set of attitudinal and experience exercises has been released and is included as Appendix A of this set.

Part 3 describes the taxonomic and content classifications used to develop and report on cognitive exercises for the 1981-82 mathematics assessment (Appendix B). About one-fourth of these exercises have been released. The remainder have not been released because National Assessment will readminister them in the future to determine whether the performance level of young Americans has changed.

The remainder of the exercise set consists of copies of released exercises and documentation for each exercise. Attitudinal and experience exercises compose Appendix A, followed by cognitive exercises in Appendix B, and by data for cognitive exercises in Appendix C.

¹ During some years National Assessment has administered exercises to supplementary samples of 17-year-olds who were not in school. However, during the 1981-82 assessment, only 17-year-olds enrolled in school were sampled.

**EXHIBIT 1. Number of Released Cognitive and Affective Exercises
by Age Group or Combination of Age Groups**

Cognitive Exercises

	<u>Calculator Not Used*</u>				<u>Calculator Used*</u>			
	<u>Age 9</u>	<u>Age 13</u>	<u>Age 17</u>	<u>Total</u>	<u>Age 9</u>	<u>Age 13</u>	<u>Age 17</u>	<u>Total</u>
Age 9 only	11	--	--	11	0	--	--	0
Age 13 only	--	7	--	7	--	0	--	0
Age 17 only	--	--	16	16	--	--	0	0
Ages 9 and 13	9	9	--	9	0	0	--	0
Ages 13 and 17	--	34	34	34	--	3	3	3
Ages 9, 13 and 17	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
TOTAL	25	55	55	82	1	4	4	4

Affective and Mathematical Experience Exercises

	<u>Age 9</u>	<u>Age 13</u>	<u>Age 17</u>	<u>Total</u>
Age 9 only	5	--	--	5
Age 13 only	--	2	--	2
Age 17 only	--	--	3	3
Ages 9 and 13	0	0	--	0
Ages 13 and 17	--	5**	5**	5
Ages 9, 13 and 17	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	5	7	8	15

*Some exercises in one booklet of exercises at each of the ages (9, 13 and 17) was administered using an electronic hand-held calculator. Some of these items were also administered in other booklets without calculators. Hence, the released exercises administered with calculators have been tallied separately.

**This number includes two computer literacy items.

PART I

NAEP ASSESSMENT PROCEDURES

All exercises in this set were administered to at least one of three different age groups of students. Exercises were administered in booklets (packages) containing 29 to 43 exercises. One package for each age level required the use of a hand calculator for some exercises. Exercise packages were accompanied by paced audiotapes. The announcer read the text and response options for most exercises and told respondents when to go on to the next exercise. The total administration time for each package, including introduction, sample exercise and background questions, was about 45 minutes.

Age groups and assessment dates were as follows:

<u>Age Group</u>	<u>Birthdates</u>	<u>Assessed During</u>
13-year-olds	January to December 1968	October to December 1981
9-year-olds	January to December 1972	January to February 1982
17-year-olds	October 1964 to September 1965	March to May 1982

Each package of exercises was administered to a national sample of from about 1,900 to about 2,100 students; no student took more than one package. About 50 percent of the exercises were multiple-choice with a machine-scorable oval (foil) to the left of each response choice. The remainder of the exercises were open-ended and required the respondent to draw diagrams, graph points, write a short answer or an equation, perform routine calculations or solve a problem. The scoring guides used to categorize responses for these exercises are included following each open-ended exercise. (Scoring guides are explained toward the end of this chapter.)

Each exercise is reproduced essentially as it was seen by the respondent. It is accompanied by documentation containing information about exercise administration. This information is described in the following example, using as a sample the documentation for Exercise RD90141.

Documentation

- A. Release #: RD90141
- B. NAEP #: 5-A2101-43D-123
- C. Content Objective: Measurement
Process Objective: Skill
- D. Exercise Type: Open-ended
Stimulus Type: Text/Tape
- E. Overlap:
- | | | | |
|---------------------------|-------------------|--------------------|--------------------|
| | $\frac{9}{05-12}$ | $\frac{13}{07-03}$ | $\frac{17}{10-01}$ |
| 1981-82 Package-Exercise: | | | |
- F. Timing: (in seconds)
- | | | | |
|---------------------|----------------|-----------------|-----------------|
| | $\frac{9}{34}$ | $\frac{13}{35}$ | $\frac{17}{35}$ |
| Exercise Total Time | | | |

A. Release Number

The 1981-82 release number contains seven characters² beginning with the letter R and uniquely identifying each exercise. The second character from the left will be a letter from A through F, or the digit zero. The letters refer to the content area to which the exercise refers. Referencing is as follows:³

- A = Number and numeration
- B = Variables and relationships
- C = Shape, size and position
- D = Measurement
- E = Probability, statistics, graphs and tables and some computer and calculator items
- F = Some technology items

Release numbers with zeros in this position are mathematics experience exercises given to all respondents at the age(s) for whom the exercise was written.

² Exercises that were administered with the electronic hand calculator have an eight character release number. The right-most character in the release number for these exercises is a "K."

³ There are two exceptions to this referencing scheme: D11711-92D-2 and E80511-92D-23, which are mathematics experience items given only once at the age(s) for which the items were written.

B. NAEP Number

In most cases, part of the NAEP number and the release number for an exercise are identical, except that the release number has an R as the first character. The NAEP number is a unique number assigned to each exercise for documentation and reference purposes. NAEP numbers also contain other numbers that may be useful to the reader.

For example, this exercise has the release number RD90141. The full NAEP number associated with this exercise is 5-A21013-43D-123, where: "5" in the first position indicates that this is a mathematics exercise (as are all the exercises in this booklet); "43D" is an assessment indicator. The assessment indicators used in this booklet are: DID—1981-1982 exercise used for the first time in 1981-82; 92D—1977-78 exercise used for the second time in 1981-82; and "43D"—1972-73 exercise used for the third time in 1981-82. The last three digits "123" are an age group indicator. The age group indicator shows what age groups responded to the exercise in 1981-82. The values are: 1 = age 9; 2 = age 13 and 3 = age 17. The digits "123" as the age group indicator would show that the exercise was administered to 9-, 13- and 17-year-olds. The age group indicator may be one, two or three digits long.

C. Content Classifications and Objectives

All the exercises administered in the 1981-82 assessment are classified by content area. Most are also classified by process objective. These classifications were used to guide the development of the 1981-82 mathematics assessment. All the exercises from the prior mathematics assessments have been classified by the 1981-82 content area and assessment objective so that they could be reported with the 1981-82 items.

D. Exercise Type and Stimulus Type

Exercises are classified as either multiple-choice or open-ended; this classification is presented as the exercise type. Some exercises have multiple-choice parts and some open-ended parts.

Most exercises have both a text and a tape-recorded stimulus. Some exercises also have additional stimulus materials, such as graphs, tables and pictures, while a few exercises have either only a taped stimulus or only a text stimulus.

E. Package and Exercise Number

Exercises were assembled into packages for administration to each age group. For each group, the 1981-82 package and exercise number is shown. For example, the number "05-12" denotes package 5, exercise 12. There is not, in general, any correspondence between package numbers for various ages. For example, package 7 for age 13 may contain some of the same exercises as package 8 for age 17.

F. Exercise Time

As mentioned, exercise packages were administered by paced audiotapes. For each age group, the total time allowed (in seconds) for an exercise in the 1981-82 assessment is shown. The total time is the time allotted for reading the exercise and for responding to it. Actual tapecripts, showing exactly what was read and how the total time was broken down into reading and responding times, are available from National Assessment. Times given for exercises measuring changes are the 1981-82 assessment times. Unless there is a footnote to the contrary, the 1972-73 and 1977-78 assessment times were identical to those in the 1981-82 assessment.

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Data Included in the Exercise Set

In Appendix A of this volume, estimates of national percent correct are reported for each foil of each part of every effective exercise. These data are placed directly on copies of the exercises. To provide room for the data the response oval (foils) used by the respondents were removed. A column of data labeled "no response" is provided for each exercise part. This data is an estimate of the percentage of respondents who did not respond to the exercise part in question. However, "no response" was not a response option for an exercise.

A few of the exercises in Appendix A have relatively high nonresponse rates. These high nonresponse rates seem to be, at least in part, due to exercise placement within the package.

For exercises given to both ages 13 and 17, the data is presented on two lines. On all these exercises the age 13 data is given on the upper line and the age 17 data on the lower one.

Correct answer estimates of percent correct are provided for cognitive items. These estimates are included in Appendix C, which contains data for the nation and each grade.

Statistics reported and definitions of the selected population groups follow.

Statistics Used in the Exercise Set

Since National Assessment uses a national probability sample to collect data, the findings are reported as estimates of the percentage of individuals in a given group who would successfully complete a particular exercise if everyone in that group in the country had been tested. Thus, when we say that "85 percent" of the 9-year-olds gave correct responses," 85 percent is an estimate of the proportion of all 9-year-olds in the country who would have answered correctly if all 9-year-olds had been assessed.

These percentages are always subject to sampling error since they are computed from a sample rather than from the entire population. The standard errors of these percentages provide a measure of the sampling variability among all possible samples. The standard error of a sample statistic can be used to construct a confidence interval for the estimate—for example, the interval from two standard errors below to two standard errors above the particular sample value would include the average of all possible values in about 95 percent of the samples.

Standard errors for the percent correct included in Appendix C of this volume can be estimated using a pair of formulas given below. For a single random sample the standard error of a percent is

For the purpose of the calculation, the value of the variable x is assumed to be the value of the variable x at the time of the calculation.

If $x \leq 20$ or $x \geq 70$ then

$$x_p = \frac{x}{n}$$

If $x < 20$ or $x > 70$ then

$$x_p = \frac{20-x}{10} \times \frac{x}{n}$$

For the purpose of the calculation:

x = the value of the variable x

x_p = the value of the variable x at the time of the calculation

n = the number of cases

The value of the variable x is assumed to be the value of the variable x at the time of the calculation.

Table 1

The value of the variable x is assumed to be the value of the variable x at the time of the calculation.

	Table 1	Table 2	Table 3
Value of x	1000	1000	1000
Value of x_p	1000	1000	1000

The value of the variable x is assumed to be the value of the variable x at the time of the calculation.

The value of the variable x is assumed to be the value of the variable x at the time of the calculation.

Table

The value of the variable x is assumed to be the value of the variable x at the time of the calculation.

[illegible]

SECRET SECRET

[illegible]

- | | | | | | |
|-------|---|--------------|---|------------|------------|
| 21-22 | + | செய்யுறையுள் | ஓ | தெய்வமுள்ள | தெய்வமுள்ள |
| 21-22 | + | செய்யுறையுள் | ஓ | தெய்வமுள்ள | தெய்வமுள்ள |
| 27 | + | தெய்வமுள்ள | ஓ | தெய்வமுள்ள | தெய்வமுள்ள |
| 28 | + | தெய்வமுள்ள | ஓ | தெய்வமுள்ள | தெய்வமுள்ள |

[illegible][illegible]

**EXHIBIT 2. Average Percentage of Scorer Agreement
for Released Open-Ended 1981-82 Mathematics Exercises**

Released Number	NAEP Number	Age Overlap	Age 9 Average Percentage Agreed	Age 13 Average Percentage Agreed	Age 17 Average Percentage Agreed
RA24031	A24031	23	----	97.3	98.8
RA24431	A24431	23	----	98.0	99.8
RA25432	A25432	1	96.9	----	----
RA25632	C70009	1	99.6	----	----
RA32921	A32921	2	----	99.4	----
RA32921K	A32921K	123	98.3	98.8	98.4
RA34342	A34342	12	99.1	100.0	----
RA35241	A35241	23	----	99.4	98.5
RA36342	A36341	23	----	96.4	97.9
RA36511	A36511	1	99.3	----	----
RA37111	A37111	1	99.7	----	----
RA44621	A44621	2	----	97.5	----
RA47344	C50002	23	----	97.6	95.8
RA47344K	C50002K	23	----	98.1	100.0
RA47711	A47711	1	98.9	----	----
RA48221	A48221	2	----	93.9	----
RA48221K	A48221K	23	----	96.3	99.3
RA52132	A52132	23	----	96.8	95.3
RA70443	A70443	1	97.4	----	----
RA71443	A71443	23	----	96.2	93.8
RA94123	P00001	23	----	98.1	98.3
RB22325	B22325	3	----	----	98.6
RB23025	H11025	23	----	98.2	98.5
RB25142	B25142	3	----	----	97.6
RB25625	B25625	2	----	97.1	----
RC60824	C60824	3	----	----	87.8
RD21722	E11006	1	94.4	----	----
RD30122	D30122	12	97.7	99.4	----
RD40722	D40722	3	----	----	99.3
RD90141	A21013	123	98.5	99.4	99.2
RD91242	D91242	3	----	----	93.5
RD91342	D91342	23	----	98.2	97.2
RD91342K	D91342K	23	----	96.3	98.6
RD92141	E15003	23	----	100.0	98.3

PART 2

AFFECTIVE AND MATHEMATICAL EXPERIENCE EXERCISES FROM THE 1977-78 MATHEMATICS ASSESSMENT (APPENDIX A)

Attitudes and Values in Mathematics

Many mathematics educators consider positive attitudes toward mathematics to be an important education outcome. However, in most cases it is inappropriate to make statements about how people should feel or think. Therefore, the affective components of the assessment were designed to be primarily descriptive--to find out what attitudes and values are held, and ultimately, to discover changes in attitudes over time.

The affective or attitudinal mathematics exercises are organized into four categories according to content. These categories are not to be construed as attitudinal scales. They are: mathematics in school, mathematics and oneself, mathematics and society, and mathematics as a discipline. All of the attitude items used by National Assessment in the 1981-82 assessment were also used in the 1977-78 assessment and were released after that assessment. It has been the policy of National Assessment to both release and reassess attitudinal items when the items seemed appropriate across multiple assessments.

Mathematics in School

Attitudes toward the mathematics encountered in school are covered in the exercises in this category. They include a school subject comparison, a breakdown of classroom activities by frequency of occurrence, students' attitudes toward these activities, and a measure of the frequency of various mathematics content activities.

Mathematics and Oneself

This category assesses a respondent's perceptions of himself or herself in relationship to mathematics. Anxiety, motivation, self-concept and enjoyment of mathematics are the topics reflected in these exercises.

Mathematics and Society

This category includes measurement of the value of mathematics. The exercises assess perceptions of attitudes toward the usefulness and importance of mathematics to society and to the individual.

Mathematics as a Discipline

Here are respondents' views of mathematics as a cumulative or compartmentalized subject or as a fixed or changing subject, and of mathematics as a process, as well as other aspects of the nature of mathematics. There were no exercises in this category deemed appropriate for age 9 respondents.

Experiences in Mathematics

A set of questions was developed to measure students' experience in mathematics-related activities. These exercises provide information about respondents' experiences with the metric system, electronic hand-held calculators, computers and, for 17-year-olds, about high school mathematics courses.

PART 3

COGNITIVE EXERCISES FROM THE 1977-78 MATHEMATICS ASSESSMENT⁴ (APPENDIX B)

Early in the development of the materials for the 1981-82 mathematics assessment a matrix for objectives was adopted. The matrix comprised mathematical process and mathematical content.

Mathematical Process

Mathematical Knowledge

The recall and recognition of mathematical ideas expressed in words, symbols or figures is the first subcategory in the mathematical process dimension. It relies, for the most part, on memory processes, and usually does not require more complex mental processes.

Mathematical Skill

Mathematical skill concerns the routine manipulation of mathematical ideas. It relies on the application of standard procedures or algorithms always leading to an answer. Mathematical skill requires the recollection of how to perform an algorithm.

Mathematical Understanding

The explanation and interpretation of mathematical knowledge compose mathematical understanding. Mathematical knowledge can be expressed in words, symbols or figures, while mathematical understanding relies primarily on the process of translating mathematical ideas within or between modes of expression. Mathematical understanding involves the memory process in addition to the processes of associating one item or knowledge with another.

⁴ A more detailed treatment of the objectives and development process for the 1981-82 mathematics assessment is given in Mathematics Objectives, 1981-82 Assessment (see Bibliography).

Mathematical Application

Application, refers to the use of mathematical knowledge, skill and understanding. It requires use of the memory, algorithmic, translation and judgment processes to solve problems.

Mathematical Content

The second dimension of the matrix divides the domain of mathematics into five content classifications, each addressed by specific exercises in the assessment. The content classifications are:

Numbers and Numeration

Whole numbers, integers, rational numbers expressed as common fractions or decimals, percents and real numbers compose numbers and numerations. A major emphasis is on operations with numbers. However, understanding of number concepts and properties and the use of numbers to solve problems are also assessed.

Variables and Relationships

Variables and relationships include algebraic facts, symbols, definitions, equations, inequalities, functions and formulas. In addition, exponents, coordinate systems and trigonometric functions are included in this category. Exercises that assess operations, understanding and problem solving are included in this classification.

Shape, Size and Position

School geometry objectives are stressed in this content classification, but the emphasis is not on geometry as a formal deductive system. NAEP used exercises concerning plane and solid figures, properties of some plane figures, basic theorems and relationships such as congruence and similarity, constructions, rotations and symmetry.

Measurement

Instrument reading, choice of appropriate units, measures of weight, capacity, time, temperature and length are included here. Also covered are concepts of area, volume and precision. Many exercises in this group use metric units or assess knowledge of the metric system of measurement.

Statistics and Probability

Probability and statistics is comprised of collecting data, organizing data with tables, charts and graphs; interpreting data; drawing inferences and making generalizations; using statistics, combinations and prediction of outcomes.

Technology

The impact of new technology on school mathematics is measured in this content area by items assessing the use of the calculator and computer literacy.

* * *

All items except for the attitude and mathematics experience items, have been classified by content objective and by process objective. There may be some disagreement as to the proper classification of some of the exercises; perhaps several exercises could be properly located in more than one matrix cell. These drawbacks not withstanding, it is hoped that the classifications will be of help to users of this set of exercises.

BIBLIOGRAPHY

Mathematics Objectives, 1972-73 Assessment. Ann Arbor, Mich.: National Assessment of Educational Progress, Education Commission of the States, 1970. Educational Resources Information Center (ERIC) no. ED 063 140. Available from National Assessment offices in Denver, Colo. .

Mathematics Objectives, Second Assessment, 1977-78 Assessment. Denver, Colo.: National Assessment of Educational Progress, Education Commission of the States, 1978. ERIC no. ED 156 439.

Mathematics Objectives, 1981-82 Assessment. Denver, Colo.: National Assessment of Educational Progress, Education Commission of the States, 1981.

APPENDIX A

Released Affective & Experience Exercises With Foil Level National Data 1981-82 Assessment

How often have you used the metric system of measurement in each of the following?

No. response		Never	Seldom	Often	I don't know
0.0	A. In mathematics classes	12.2	30.9	33.8	3.2
0.1	B. In science classes	23.2	34.2	38.7	3.9 *
0.2	C. In other classes in school	45.2	40.5 *	8.1	6.0
0.3	D. Outside of school	49.1	36.2	11.7	2.6



DO NOT CONTINUE
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Report #: 4D11711

NAEP #: 5-D11711-92D-2

Objective: 8, Mathematics Experience

Exercise Type: Multiple-choice

Stimulus Type: Text/Tape

Overlap:

Package-Exercise:

$$\frac{13}{13=23}$$

TOTAL TIME: (in seconds)

$$\frac{13}{23}$$

A. How much do you like or dislike each of these subjects?

No. Response		Dislike a lot	Dislike a little	Undecided	Like a little	Like a lot	Never said
0.7	Science	8.4	11.6	11.0	45.0	25.1	1.2
0.2		9.4	15.0	5.4	45.3	22.2	0.5
2.1	Social Studies	11.7	15.5	7.3	34.5	25.3	0.6
0.7		10.0	15.2	9.7	39.2	25.2	1.0
2.4	Mathematics	7.3	11.2	5.3	31.0	41.2	0.2
0.9		13.5	12.8	5.8	34.2	31.2	0.2
2.4	English	9.5	15.3	5.9	34.1	25.6	1.0
0.5		10.1	15.2	5.8	36.1	23.2	0.1
2.9	Physical Ed.	5.3	5.2	5.4	17.6	55.1	6.2
0.3		5.5	5.9	5.7	24.2	55.0	2.3

B. How easy or hard is each of these subjects?

		Very Easy	Easy	Undecided	Hard	Very Hard	Never said
2.2	Science	6.1	36.7	20.6	29.0	3.9	1.2
0.5		4.3	33.6	19.3	36.4	5.4	0.2
1.8	Social Studies	7.5	40.0	16.3	27.3	6.3	0.7
1.3		10.7	42.6	15.4	22.8	5.3	0.9
1.2	Mathematics	15.7	41.2	13.2	23.9	4.8	0.1
0.2		10.4	33.3	12.1	31.4	12.4	0.2
1.2	English	13.0	41.0	17.7	23.1	6.1	0.9
0.2		11.5	42.4	14.3	23.1	3.2	0.2
1.2	Physical Ed.	47.3	32.0	7.9	4.1	1.0	6.5
0.3		63.2	25.3	5.8	2.3	1.0	2.1

C. How important or unimportant is each of these subjects?

		Unim- portant	Not very important	Undecided	Im- portant	Very im- portant	Never said
2.1	Science	7.2	13.4	10.1	47.6	22.3	1.1
0.5		4.7	15.2	9.1	44.5	25.2	0.2
1.9	Social Studies	3.9	14.0	11.0	41.0	22.4	0.3
0.4		4.5	15.9	11.9	49.3	16.2	0.7
1.5	Mathematics	2.1	2.1	3.4	26.3	64.5	0.0
0.7		0.8	2.2	3.3	34.9	57.4	0.1
1.7	English	2.4	5.0	5.2	32.8	52.2	0.7
0.5		1.7	3.9	5.0	29.8	59.0	0.0
1.4	Physical Ed.	8.7	23.5	10.9	29.1	15.9	5.5
0.4		11.2	20.6	10.8	20.8	14.4	1.7

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How much do you like or dislike each of these subjects?

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

Figure 7

Figure 8

Figure 9

Figure 10

Figure 11

Figure 12

Figure 13

Figure 14

Figure 15

Figure 16

Figure 17

2. Computer-generated records and data

[illegible][illegible][illegible]

Sample	Sample	Sample	Sample	Sample
Disposal	Disposal	Intervention	Agon	Agon
23.3	27.4	29.7	28.2	26.3
38.2	45.3	52.7	41.0	36.6

School #		School #		School #		School #		School #	
Disaster		Disaster		Uninsured		A-900		A-900	
2.2		3.6		17.8		61.4		20.7	
1.0		4.3		2.3		58.4		33.2	

Station	Discharge	Channel	Area	Station	Discharge
2.3	10.2	10.2	10.2	21.0	21.0

Spring 1950	Spring 1951	Spring 1952	Spring 1953	Spring 1954	Spring 1955
2.5	6.3	17.6	48.2	78.6	25.6

SECRET

(Cont.)

How do you feel about each of these statements?

II. Computers are useful for doing repetitive, monotonous tasks

No. Respondents	Sample Disagree	Sample Agree	Unanswered	Agree	Sample Agree
0.2 0.2	11.2 11.2	11.2 11.2	17.7 17.7	82.4 82.4	11.3 11.3

III. Computers are programmed to follow precise, specific instructions

Sample Disagree	Sample Agree	Unanswered	Agree	Sample Agree
0.2 0.1	11.3 11.3	11.3 11.3	11.3 11.3	11.3 11.3

IV. Computers require special languages for people to communicate with them

Sample Disagree	Sample Agree	Unanswered	Agree	Sample Agree
0.1 0.1	11.2 11.2	11.2 11.2	11.2 11.2	11.2 11.2

V. Computers have a mind of their own

Sample Disagree	Sample Agree	Unanswered	Agree	Sample Agree
0.1 0.1	21.2 21.2	11.3 11.3	11.3 11.3	11.3 11.3

VI. Computers make mistakes much of the time

Sample Disagree	Sample Agree	Unanswered	Agree	Sample Agree
0.1 0.1	21.3 21.3	11.3 11.3	11.3 11.3	11.3 11.3

VII. To work with a computer, a person must be a mathematician

Sample Disagree	Sample Agree	Unanswered	Agree	Sample Agree
0.2 0.1	21.1 21.1	11.3 11.3	11.3 11.3	11.3 11.3

VIII. Computers store information and information

Sample Disagree	Sample Agree	Unanswered	Agree	Sample Agree
0.1 0.2	11.2 11.2	11.2 11.2	11.2 11.2	11.2 11.2



Do Not Credit
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Report #: RE60551

NAEP #: 5-E60551-92D-23

Content Objective: F. Technology

Process Objective: Computer Literacy

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{14-03}$	$\frac{17}{13-02}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{151}$	$\frac{17}{154}$

This exercise asks how you feel about mathematics or mathematics activities. There are no correct answers. The answer choices are "Strongly Disagree," "Disagree," "Undecided," "Agree," or "Strongly Agree." For each part, choose the one response that best describes how you feel about the statement. Be sure to fill in one oval in each box.

No
Response
0.2
0.2

A. I am willing to work hard to do well in mathematics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.7	2.0	5.0	56.2	35.9
1.0	5.7	13.3	58.6	21.4

0.2
0.2

B. Mathematics is more for girls than for boys.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
59.1	31.2	6.2	1.8	1.4
55.0	36.3	6.6	1.1	0.7

0.7
0.4

C. Learning mathematics is mostly memorizing.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
5.9	30.0	17.0	38.0	8.5
9.0	32.7	11.7	39.5	6.7

0.5
0.2

D. Mathematics is useful in solving everyday problems.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
2.5	9.9	10.9	45.4	30.7
2.8	11.2	10.4	50.4	24.9

1.2
0.5

E. Exploring number patterns plays almost no part in mathematics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
19.9	46.3	22.3	8.2	2.0
20.5	47.7	22.4	6.8	2.0



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

(Continued)

How do you feel about each of these statements?

No Response	F. I enjoy mathematics.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.2	5.9	13.3	13.2	48.3	19.2
0.1	10.4	19.9	15.6	40.2	13.8
0.3	G. There is always a rule to follow in solving mathematics problems.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.3	0.4	4.2	4.7	61.7	28.7
0.3	0.7	4.7	5.1	66.0	23.2
0.2	H. Most of mathematics has practical use.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.2	1.6	4.9	11.5	60.9	21.0
0.1	1.3	10.1	10.2	62.6	15.6
0.2	I. Knowing how to solve a problem is as important as getting a solution.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.2	0.5	2.8	7.4	51.6	37.6
0.3	0.7	2.4	3.9	50.8	41.9
0.1	J. Doing mathematics requires lots of practice in following rules.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.1	1.6	11.7	14.2	50.1	22.3
0.3	0.6	8.5	11.6	58.3	20.8
0.2	K. I can get along well in everyday life without using mathematics.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.2	40.9	42.1	9.2	5.3	2.2
0.2	29.6	44.5	12.3	11.1	2.3
0.3	L. Mathematicians work with symbols rather than ideas.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.3	3.6	24.9	42.4	24.7	4.1
0.2	6.1	28.4	35.1	27.2	3.0

23

27



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

(Continued)

How do you feel about each of these statements?

No Response 0.7 0.2	M. Fewer men than women have the logical ability to become mathematicians.					
	Strongly Disagree 26.8 31.4	Disagree 42.6 45.6	Undecided 19.3 16.1	Agree 9.2 5.8	Strongly Agree 1.5 0.2	
0.7 0.2	N. Knowing why an answer is correct is as important as getting the correct answer.					
	Strongly Disagree 1.1 1.1	Disagree 3.5 2.2	Undecided 6.9 4.6	Agree 58.0 54.5	Strongly Agree 29.8 37.5	
0.6 0.2	O. Mathematics is made up of unrelated topics.					
	Strongly Disagree 10.1 12.2	Disagree 42.2 49.5	Undecided 32.4 26.9	Agree 13.3 10.0	Strongly Agree 1.4 1.1	
0.4 0.2	P. I really want to do well in mathematics.					
	Strongly Disagree 1.3 1.4	Disagree 0.9 3.4	Undecided 3.8 9.2	Agree 36.1 50.0	Strongly Agree 57.6 35.8	
0.5 0.2	Q. My parents really want me to do well in mathematics.					
	Strongly Disagree 0.6 1.0	Disagree 0.6 1.9	Undecided 3.5 9.5	Agree 29.9 43.9	Strongly Agree 64.9 43.5	
0.5 0.2	R. I feel good when I solve a mathematics problem by myself.					
	Strongly Disagree 1.2 1.4	Disagree 3.9 2.2	Undecided 7.4 6.1	Agree 43.8 47.1	Strongly Agree 43.2 43.0	



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RE61051

NAEP #: 5-E61051-92D-23

Objective: G. Attitudes

Exercise Type: Multiple-choice

Stimulus Type: Text/Tape

Overlap:	$\frac{13}{13-02}$	$\frac{17}{06-02}$
Package-Exercise:		

TOTAL TIME: (in seconds)	$\frac{13}{218}$	$\frac{17}{202}$
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This exercise asks how you feel about mathematics or mathematics activities. There are no correct answers. The answer choices are "Strongly Disagree," "Disagree," "Undecided," "Agree," or "Strongly Agree." For each part, choose the one response that best describes how you feel about the statement. Be sure to fill in one oval in each box.

No
Response
0.5
0.2

A. I am good at mathematics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1.3	7.6	20.1	57.7	12.8
2.4	13.5	26.0	47.4	10.5

1.0
0.9

B. Mathematics helps a person to think logically.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1.0	4.6	19.2	55.8	18.4
1.1	5.6	14.1	61.2	17.1

1.1
0.4

C. It is important to know mathematics such as algebra or geometry in order to get a good job.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
2.2	11.8	13.8	43.5	27.7
3.6	26.2	19.4	37.6	12.8

0.8
0.5

D. It is important to know arithmetic in order to get a good job.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1.3	6.5	9.2	45.7	36.5
1.0	7.3	7.0	49.0	35.2



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

32

30

(Continued)

How do you feel about each of these statements?

No Response	E. I am taking mathematics only because I have to.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.8	18.6	43.6	11.7	20.4	5.0
0.8	20.0	44.8	8.9	21.5	4.0
1.5	F. New discoveries are seldom made in mathematics.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1.0	12.4	31.3	24.7	25.9	4.1
	10.2	40.1	25.0	19.9	3.0
0.8	G. Mathematics is more for boys than for girls.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.5	57.7	32.6	5.7	2.3	0.9
	53.0	38.5	5.5	1.9	0.5
0.7	H. I would like to take more mathematics.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.4	10.9	17.8	24.2	33.1	13.4
	11.9	19.5	23.4	29.3	11.5
1.0	I. Creative people usually have trouble with mathematics.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.5	17.6	37.9	30.9	10.5	2.0
	16.1	44.8	28.5	8.2	1.8



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

(Continued)

How do you feel about each of these statements?

No Response	J. Estimating is an important mathematical skill.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.5	1.4	7.8	16.1	63.7	10.4
0.7	1.1	8.7	16.4	64.5	8.6
0.4	K. I usually understand what we are talking about in mathematics.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.4	1.4	8.5	10.4	64.2	15.1
0.4	2.2	14.8	13.7	59.4	9.4
0.7	L. Trial and error can often be used to solve a mathematics problem.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.3	4.2	9.7	33.1	41.7	10.6
0.3	1.1	8.7	18.3	59.6	12.0
0.3	M. A good grade in mathematics is important to me.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.2	0.6	1.4	1.9	36.9	59.0
0.2	0.8	4.4	6.8	51.5	36.3
0.4	N. Justifying the mathematical statements a person makes is an extremely important part of mathematics.				
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
0.3	1.5	5.2	30.7	49.7	12.5
0.3	0.9	3.8	25.9	55.5	13.6

3.1

32



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: AE61151

NAEP #: 5-E61151-82D-23

Objective: G. Attitudes

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{18-01}$	$\frac{17}{89-01}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{172}$	$\frac{17}{103}$

35

33

How do you feel about each of these statements about mathematics? Do you disagree or agree? Fill in one oval for each statement. If you neither agree nor disagree, fill in the middle oval under "Undecided."

No Response	0.4	A. Mathematics is more for boys than for girls.		
		Disagree	Undecided	Agree
		68.3	15.6	14.6
		B. It is important to know some mathematics in order to get a good job.		
		Disagree	Undecided	Agree
		9.1	10.5	79.1
		C. I can get along well in everyday life without using mathematics.		
1.3	1.2	Disagree	Undecided	Agree
		69.2	15.6	14.0
		D. I would like to work at a job that lets me use mathematics.		
		Disagree	Undecided	Agree
		19.9	26.0	53.3
		E. Mathematics is useful in solving problems in everyday life.		
		Disagree	Undecided	Agree
0.9	0.9	12.0	17.6	63.5
		F. Most people do not use mathematics in their jobs.		
		Disagree	Undecided	Agree
		39.7	72.3	36.5
		G. Mathematics is more for girls than for boys.		
		Disagree	Undecided	Agree
		73.4	17.0	9.1

0.5
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DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: 4261251

REF #: 5-461251-920-1

Objective: C. Attitudes

Exercise Type: Multiple-choice

Stimulus Type: Text/Text

Overlaid:

Package-Exercise: $\frac{9}{92-01}$

TOTAL TIME: (in seconds)

$\frac{9}{92}$

NO
FEBRUARY
1966

27

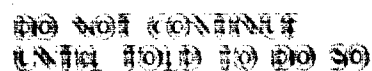
Abstract

1982

	Sometimes true	Not true
True about me	About me	About me
\$3.6	\$2.9	\$2.8

I am willing to work hard to do well in my studies.

True + loved me	Sometimes true + loved me	Not true + loved me
10.1	11.0	5.5



1990-1991 1991-1992

1992-1993 1993-1994

1994-1995 1995-1996

1996-1997 1997-1998
1998-1999 1999-2000

1999-2000 2000-2001

2001-2002 (2002-2003)

2001-2002

2002-2003

Category	Days	In interview	Not in interview
Like	72.6	72.7	72.6
Dislike	27.4	27.3	27.4
Important	44.2	44.2	44.2
Not important	55.8	55.8	55.8

Category	Days	In interview	Not in interview
Like	73.3	73.3	73.3
Dislike	26.7	26.7	26.7
Important	57.5	57.5	57.5
Not important	42.5	42.5	42.5



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॥ श्री गुरुभ्यो नमः ॥

(Continued)

No
Response

C. Solving mathematics word problems

1.2	Easy 41.3	In between 43.0	Hard 14.5
3.3	Like 44.0	In between 30.6	Do not like 22.0
3.7	Important 69.0	In between 21.6	Not important 5.7

D. Learning multiplication or times tables

1.3	Easy 52.3	In between 29.3	Hard 17.1
3.4	Like 60.1	In between 21.6	Do not like 14.9
3.1	Important 80.2	In between 13.3	Not important 3.4

E. Learning how to measure things with a ruler

0.8	Easy 64.2	In between 25.7	Hard 9.3
3.1	Like 57.2	In between 25.7	Do not like 14.0
3.1	Important 69.3	In between 21.0	Not important 6.6



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RE61451

NAEP #: 5-E61451-92D-1

Objective: 0. Attitudes

Exercise Type: Multiple-choice

Stimulus Type: Text/Tape

Overlap:

Package-Exercise: $\frac{9}{05-10}$

TOTAL TIME: (in seconds)

$\frac{9}{160}$

How do you feel about these activities in learning mathematics? First, do you like them a lot, like them a little, or not like them at all? Second, how much do they help you in learning mathematics? Do they help you a lot, help you a little, or not help you at all? For each activity, fill in one oval on each line that describes how you feel.

No
Response
1.3

A. Taking mathematics tests

I like it a lot.

50.1

I like it a little.

35.6

I do not like it.

13.0

It helps me a lot.

79.0

It helps me a little.

13.7

It does not help me.

3.1

4.2

B. Doing mathematics homework

I like it a lot.

36.4

I like it a little.

37.2

I do not like it.

24.5

It helps me a lot.

65.9

It helps me a little.

25.0

It does not help me.

4.2

1.9

4.8

C. Helping a classmate do mathematics

I like it a lot.

50.4

I like it a little.

28.4

I do not like it.

19.4

It helps me a lot.

35.5

It helps me a little.

29.9

It does not help me.

29.9

1.8

4.7

D. Playing mathematics games

I like it a lot.

80.8

I like it a little.

13.7

I do not like it.

4.1

It helps me a lot.

66.5

It helps me a little.

25.0

It does not help me.

4.5

1.3

3.9



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

13
41

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(Continued)

How do you feel about these activities in learning mathematics?

No Response	E. Listening to the teacher explain a mathematics lesson		
	I like it a lot. 45.3	I like it a little. 39.9	I do not like it. 13.0
1.6			
3.5	It helps me a lot. 72.0	It helps me a little. 20.1	It does not help me. 3.5
2.8	F. Watching the teacher work mathematics problems on the board		
	I like it a lot. 51.8	I like it a little. 35.0	I do not like it. 10.4
3.2	It helps me a lot. 67.1	It helps me a little. 24.2	It does not help me. 5.4
2.9	G. Getting individual help from the teacher on your mathematics		
	I like it a lot. 55.8	I like it a little. 31.0	I do not like it. 10.3
3.1	It helps me a lot. 70.0	It helps me a little. 22.1	It does not help me. 4.8
2.5	H. Getting help from a classmate on mathematics		
	I like it a lot. 35.2	I like it a little. 35.6	I do not like it. 26.6
3.5	It helps me a lot. 37.3	It helps me a little. 37.5	It does not help me. 21.8
1.8	I. Discussing mathematics in class		
	I like it a lot. 52.5	I like it a little. 33.5	I do not like it. 12.2
3.7	It helps me a lot. 61.2	It helps me a little. 27.6	It does not help me. 7.5



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: EE61551

NAEP #: 15-EE61551-92D-1

Objective: C. Attitudes

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:
Package-Exercise: $\frac{9}{04-10}$

TOTAL TIME: (in seconds) $\frac{9}{200}$

2

15

43

How often did you do these activities in your high school mathematics courses? Fill in one oval in each box.

No Response 0.3	A. Take mathematics tests		
	Often 69.8	Sometimes 27.5	Never 2.4
0.4	B. Do mathematics homework		
	Often 65.0	Sometimes 29.2	Never 5.5
0.3	C. Help a classmate do mathematics		
	Often 14.4	Sometimes 72.3	Never 13.0
0.3	D. Play mathematics games		
	Often 3.0	Sometimes 40.4	Never 56.2
0.3	E. Listen to the teacher explain a mathematics lesson		
	Often 77.0	Sometimes 19.1	Never 3.5
0.3	F. Watch the teacher work mathematics problems on the board		
	Often 78.5	Sometimes 18.7	Never 2.5

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46

44



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

(Continued)

How often did you do these activities in your high school mathematics courses?

No Response 0.2	G. Get individual help from the teacher on your mathematics	Often 16.6	Sometimes 72.1	Never 11.1
0.1	H. Make reports or do projects on mathematics	Often 1.8	Sometimes 22.2	Never 75.8
0.1	I. Work ahead in your mathematics book	Often 6.6	Sometimes 42.0	Never 51.2
0.1	J. Do mathematics problems that are not assigned	Often 3.8	Sometimes 40.0	Never 56.1
0.2	K. Get help in mathematics from a classmate	Often 16.8	Sometimes 73.6	Never 9.3
0.2	L. Study mathematics topics that aren't in the textbook	Often 3.0	Sometimes 31.7	Never 65.1
0.2	M. Discuss mathematics in class	Often 50.2	Sometimes 41.9	Never 7.7



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

(Continued)

How often did you do these activities in your high school mathematics courses?

No Response 0.1	N. Work mathematics problems at the board	Often 25.5	Sometimes 63.3	Never 11.1
0.2	O. Work mathematics problems in small groups	Often 7.8	Sometimes 55.7	Never 36.3
0.1	P. Work mathematics problems alone	Often 81.4	Sometimes 17.2	Never 1.2
0.1	Q. Do mathematics laboratory activities	Often 2.3	Sometimes 17.4	Never 80.2
0.1	R. Choose what mathematics you wanted to study	Often 20.1	Sometimes 34.4	Never 45.4
0.1	S. Use a mathematics textbook	Often 88.2	Sometimes 9.7	Never 2.0



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: AE61951

NAEP #: 5-E61951-929-3

Objective: C. Attitudes

Exercise Type: Multiple-choice

Stimulus Type: Text/Tape

Overlap: $\frac{17}{67-01}$

Percentage-Exercise: $\frac{17}{17\%}$

TOTAL TIME: (in seconds)

No
Response
9.2
0.1

A. Have you ever studied mathematics through computer instruction?

Yes	No	I don't know,
23.5	69.4	6.9
14.9	73.2	1.7

0.2
0.1

B. Do you think computers are useful for teaching mathematics?

Yes	No	I don't know,
72.0	15.0	11.8
76.5	11.7	11.6

0.4
0.4

C. Do you have access to a computer terminal in your school for learning mathematics?

Yes	No	I don't know,
22.7	52.6	24.3
42.2	30.5	12.7

0.1
0.0

D. 1. Do you know how to program a computer?

Yes	No	I don't know,
19.9	73.6	6.4
21.5	75.8	2.6

65.1
75.0

2. If yes, what programming language do you know?

22.0	10.2	BASIC
0.5	0.3	ALGOL
1.6	0.7	FORTRAN
0.7	0.2	APL
10.0	3.7	Other

0000000000

50



DO NOT CONTINUE
UNTIL TOLD TO DO SO

48

(Continued)

E. Do you think computer programming is a good topic to study in a mathematics class?

	Yes	No	I don't know
Response	66.3	19.3	14.0
0.3	30.7	11.6	7.5
0.2			

F. Have you ever used a computer to

	Yes	No	I don't know
1. solve a linear programming problem?	9.7	78.2	10.6
2. solve a mathematical problem?	10.2	65.6	3.6
3. play a game?	11.1	47.5	1.7
4. process business, scientific, or social information?	11.7	17.7	1.9
5. perform statistical analysis of data?	10.0	76.8	12.0
	16.1	30.9	2.4

G. Have you ever written a computer program to

	Yes	No	I don't know
1. solve a linear programming problem?	5.4	63.7	9.5
2. solve a mathematical problem?	7.2	69.5	2.7
3. play a game?	19.6	54.1	5.6
4. process business, scientific, or social information?	21.2	72.7	1.6
5. perform statistical analysis of data?	41.7	52.3	5.0
	26.3	71.1	1.2
	7.5	66.0	5.2
	10.0	67.5	1.7
	7.1	61.5	10.1
	10.1	67.3	2.1



DO NOT CONTINUE
UNTIL TOLD TO DO SO

第(一)次

第(二)次

第(三)次

第(四)次

第(五)次

第(六)次

第(七)次

第(八)次

第(九)次

第(十)次

第(十一)次

第(十二)次

第(十三)次

第(十四)次

第(十五)次

第(十六)次

第(十七)次

第(十八)次

第(十九)次

第(二十)次

第(二十一)次

BACKGROUND QUESTIONS: These questions were developed to be a general measure of the child's characteristics.

For each of the following questions, fill in the circle next to the

1. The music system that your like most, record and tape.	Yes 4-5	No 4-6	I don't know 4-7
2. How often have you used the music system at home?	Often 4-8	Sometimes 4-9	Never 4-10
3. How often have you used a hand calculator?	Often 4-11	Sometimes 4-12	Never 4-13
4. Do you or your family own a hand calculator?	Yes 4-14	No 4-15	I don't know 4-16
5. Have you noticed how fast calculators that you use are in mathematics class?	Yes 4-17	No 4-18	I don't know 4-19

These questions were not developed to be a general measure of the child's characteristics.



STOP. Do not continue to the next page.

"I am September")

No Comptroller		Standard 1 actual cost	Standard 2 actual cost	Standard base cost 2 cost	Net standard	Net cost
1-1	A. Comptroller, Standard in Comptroller Washington	15.3	1.8	4.3	15.3	1.3
1-2	B. Comptroller in Comptroller Washington	15.3	1.8	4.3	15.3	1.3
1-3	C. Comptroller in Comptroller Washington	15.3	1.8	4.3	15.3	1.3
1-4	D. Comptroller in Comptroller Washington	15.3	1.8	4.3	15.3	1.3
1-5	E. Comptroller in Comptroller Washington	15.3	1.8	4.3	15.3	1.3
1-6	F. Comptroller in Comptroller Washington	15.3	1.8	4.3	15.3	1.3
1-7	G. Comptroller in Comptroller Washington	15.3	1.8	4.3	15.3	1.3
1-8	H. Comptroller in Comptroller Washington	15.3	1.8	4.3	15.3	1.3
1-9	I. Comptroller in Comptroller Washington	15.3	1.8	4.3	15.3	1.3

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IF YOU DO NOT SO

BACKGROUND QUESTIONS--This exercise was included in every package for intended use as a background variable.

For each of the following questions, fill in one oval in each box.

No
Response
0.3

<p>A. The metric system of measurement uses units like centimeters, liters, and kilograms. How often have you used the metric system?</p> <table> <tr> <td>Often</td> <td>Seldom</td> <td>Never</td> <td colspan="3">I don't know.</td> </tr> <tr> <td>30.7</td> <td>58.4</td> <td>7.5</td> <td colspan="3">3.1</td> </tr> </table>	Often	Seldom	Never	I don't know.			30.7	58.4	7.5	3.1		
Often	Seldom	Never	I don't know.									
30.7	58.4	7.5	3.1									
<p>B. How often do you use a hand calculator?</p> <table> <tr> <td>Almost Daily</td> <td>A few times a week</td> <td>Less than once a week</td> <td>Once a month</td> <td>Never</td> <td>I don't know.</td> </tr> <tr> <td>6.4</td> <td>19.4</td> <td>21.0</td> <td>25.3</td> <td>23.0</td> <td>4.4</td> </tr> </table>	Almost Daily	A few times a week	Less than once a week	Once a month	Never	I don't know.	6.4	19.4	21.0	25.3	23.0	4.4
Almost Daily	A few times a week	Less than once a week	Once a month	Never	I don't know.							
6.4	19.4	21.0	25.3	23.0	4.4							
<p>C. Does your school provide hand calculators for use in mathematics class?</p> <table> <tr> <td>Yes</td> <td>No</td> <td>I don't know.</td> </tr> <tr> <td>7.4</td> <td>88.3</td> <td>4.5</td> </tr> </table>	Yes	No	I don't know.	7.4	88.3	4.5						
Yes	No	I don't know.										
7.4	88.3	4.5										

0.3

0.4

This exercise was not developed to be a direct measure of the Math Objectives.

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55



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

BACKGROUND QUESTIONS--This exercise was included in every package for intended use as a background variable.

For each of the following questions, fill in one oval in each box.

No Response 0.4	A. The metric system of measurement uses units like centimeters, liters, and kilograms. How often have you used the metric system of measurement?					
	Often	Seldom	Never	I don't know.		
	19.1	61.8	16.9	1.8		
	B. How often do you use a hand calculator?					
	Almost Daily	A few times a week	Less than once a week	Once a month	Never	I don't know.
0.3	19.2	24.8	18.0	20.1	14.9	2.6
	C. Does your school provide hand calculators for use in mathematics classes?					
	Yes	No	I don't know.			
0.3	10.3	83.3	6.1			
	D. Does your school provide hand calculators for use in other classes?					
	Yes	No	I don't know.			
0.3	16.0	72.4	11.3			

This exercise was not developed to be a direct measure of the Math Objectives.



**DO NOT CONTINUE
UNTIL TOLD TO DO SO.**

56

54

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APPENDIX B

Released

Cognitive Exercises

With

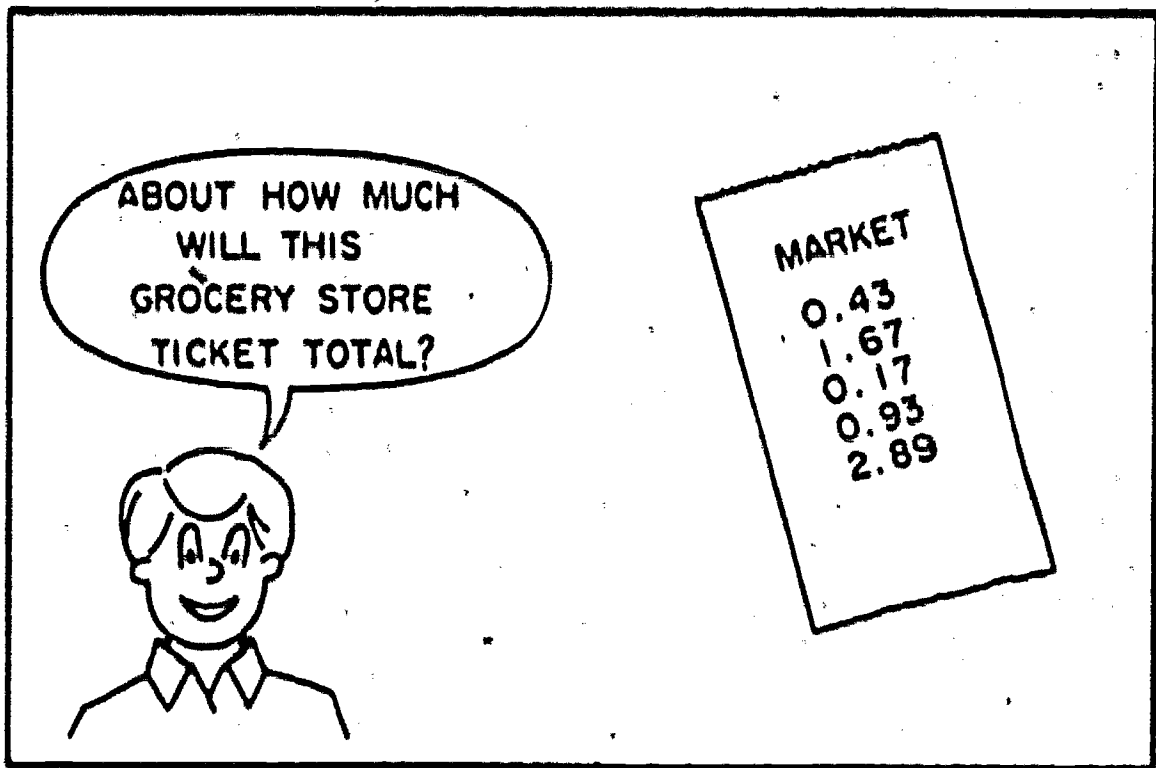
Scoring Guides

1981-82

Assessment

57

SS



- ☐ Between \$3 and \$4
- ☐ Between \$6 and \$7
- ☐ Between \$9 and \$10
- ☐ Between \$12 and \$15
- ☐ I don't know.

58



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

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Report #: RA00944

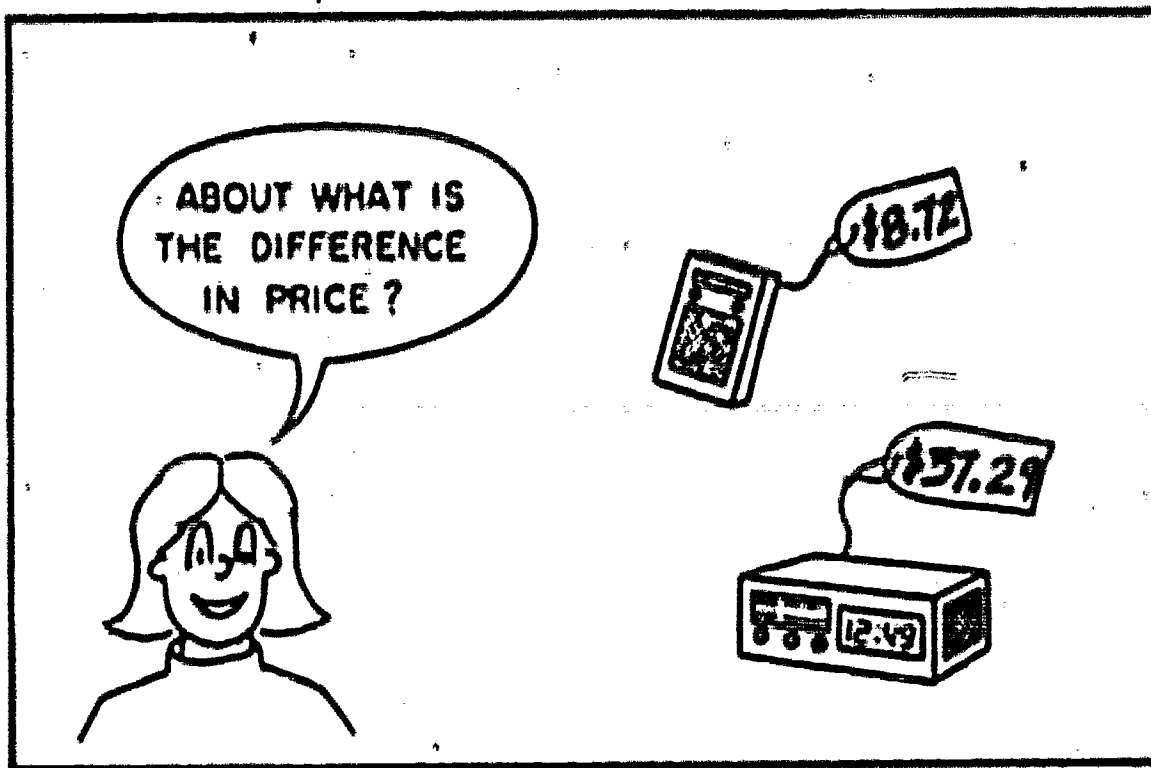
NAEP #: 5-A00944-D1D-23

Content Objective: A. Number and Numeration

Process Objective: Applications of Estimation

Exercise Type: Multiple-choice
Stimulus Type: Text

Overlap:	$\frac{13}{11-14}$	$\frac{17}{14-14}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{14}$	$\frac{17}{14}$



☒ \$29

☐ \$31

☐ \$45

☐ \$46

☐ I don't know.

60



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

58

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Report #: RA01144

NAEP #: 5-401144-D1D-23

Content Objective: 4. Number and Numeration

Process Objective: Applications of Estimation

Exercise Type: Multiple-choice
Stimulus Type: Text

Overlap:	$\frac{13}{11-13}$	$\frac{17}{14-13}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{14}$	$\frac{17}{14}$



☐ 2

☐ 3

☐ 4

☐ 5

☐ I don't know.



62

0000000000

Report #: RA02444

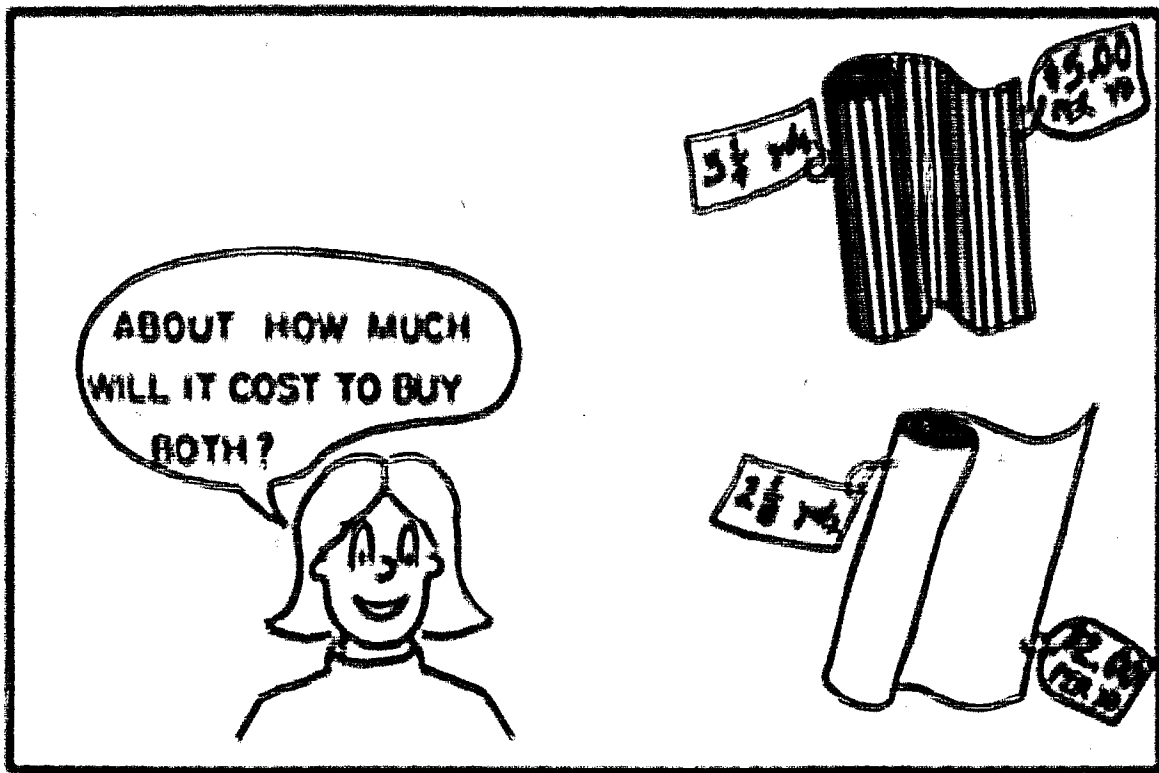
STEP #: 5-402444-012-23

Content Objective: 4. Number and Numeration

Process Objective: Applications of Estimation

Exercise Type: Multiple-choice
Stimulus Type: Text

Overlap:	$\frac{17}{11-12}$	$\frac{17}{14-12}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{17}{14}$	$\frac{17}{14}$



- ☐ \$6
- ☐ \$12
- ☐ \$20
- ☐ \$25
- ☐ \$30
- ☐ I don't know.



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

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Report #: RA02944

NAEP #: 5-402 (14-4-0) 12-23

Content Objective: 4. Number and Numeration

Process Objective: Applications of Estimation

Exercise Type: Multiplication
Stimulus Type: Text

Overlap:	$\frac{17}{11 \times 11}$	$\frac{17}{11 \times 11}$
Packages/Exercise:		
TOTAL TIME: (in seconds)	$\frac{17}{11}$	$\frac{17}{11}$

How many of the following are true?

☐ $5 + 4 = 9$

☐ $5 + 4 = 9$

☒ $5 + 4 = 9$

☐ $5 + 4 = 9$

☐ $5 + 4 = 9$



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DO NOT CONTINUE
UNTIL TOLD TO DO SO

56
64

第(1)题 答：

第(2)题 答：

第(3)题 答：

第(4)题 答：

第(5)题 答：

第(6)题 答：

第(7)题 答：

第(8)题 答：

第(9)题 答：

第(10)题 答：

第(11)题 答：

第(12)题 答：

第(13)题 答：

第(14)题 答：

第(15)题 答：

第(16)题 答：

$$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$$

第(17)题 答：

$$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$$

0

57

65

67

What is the quotient on the box?

- ☐ 61,140
- ☐ 61,140,000
- ☐ 61,140,000,000
- ☒ 61,140,000,000,000
- ☐ 61,140,000,000,000,000
- ☐ I don't know.

243

What is the quotient on the box?

- ☐ 243,000,000,000,000,000
- ☐ 243,000,000,000,000,000,000
- ☐ 243,000,000,000,000,000,000,000
- ☒ 243,000,000,000,000,000,000,000,000
- ☐ 243,000,000,000,000,000,000,000,000,000
- ☐ I don't know.



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use for any other purpose.



Report #: RA11431

NAEP #: 5-A11431-92D-1

Content Objective: A. Number and Numeration

Process Objective: Knowledge
Stimulus Type: Text/Tape

Overlap: $\frac{9}{01-01}$
Package-Exercise:

TOTAL TIME: (in seconds) $\frac{9}{50}$

Which one of the following is the same as $\frac{1}{3}$?

☐ $\frac{2}{6}$

☐ $\frac{1}{6}$

☒ $\frac{2}{3}$

☐ $\frac{3}{3}$

☐ I don't know.

0000000000



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RA11832

NAEP #: 5-A11832-92D-12

Content
Objective: A. Number and Numeration

Process
Objective: Skill in Computation

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:	$\frac{9}{02-17}$	$\frac{13}{10-35}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{9}{26}$	$\frac{13}{16}$

A. Which decimal is equal to $\frac{1}{4}$?

☐ .11

☒ .25

☐ .4

☐ .41

☐ .5

☐ I don't know.

B. Which decimal is equal to $\frac{3}{8}$?

☒ .375

☐ .428571

☐ .66

☐ .77

☐ .83

☐ I don't know.

0000000000

72

70



DO NOT CONTINUE
UNTIL TOLD TO DO SO

(Continued)

C. Which decimal is equal to $\frac{5}{6}$?

☐ .375

☐ .428571

☐ .66

☐ .77

☐ .83

☐ I don't know.

73



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

71

Report #: RA12632

NAEP #: 5-A12632-92D-23

Content Objective: A. Number and Numeration

Process Objective: Skill in Computation

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{09-22}$	$\frac{17}{09-31}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{69}$	$\frac{17}{61}$

A. What does the 5 stand for in the number in the box?

3,517

- ☐ 5 ones
- ☐ 5 tens
- ☒ 5 hundreds
- ☐ 5 thousands

- ☐ I don't know.

B. What does the 2 stand for in the number in the box?

233

- ☐ 2 ones
- ☐ 2 tens
- ☒ 2 hundreds
- ☐ 2 thousands

- ☐ I don't know.

0000000000



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RA14511

NAEP #: 5-A14N11-92D-12

Content

Objective: A. Number and Numeration

Process

Objective: Knowledge

Exercise Type: Multiple-choice

Stimulus Type: Text/Tape

Overlap:

Package-Exercise:

$$\frac{9}{24-15}$$

$$\frac{13}{27-11}$$

TOTAL TIME: (in seconds)

$$\frac{9}{42}$$

$$\frac{13}{38}$$

Frank has a motorcycle that requires him to mix the oil with the gasoline. It takes $\frac{1}{4}$ pint of oil for every gallon of gasoline. If he wishes to put in $1\frac{1}{2}$ gallons of gasoline, how much oil will he need?

☐ $\frac{1}{4}$ pint oil

☐ $\frac{3}{4}$ pint oil

☒ $\frac{1}{2}$ pint oil

☐ 1 pint oil

☐ I don't know.



Report #: 5A21841

NAEP #: 5-A21841-92B-23

Content:

Objective: A. Number and Numeration

Process:

Objective: Applications of Routine Problems

Exercise Type: Multiple-choice

Stimulus Type: Text/Tape

Overlap:

Package-Exercise:

$\frac{13}{10 \times 10}$

$\frac{17}{12 \times 8}$

TOTAL TIME: (in seconds)

$\frac{17}{30}$

$\frac{13}{40}$

Write in decimal form:

A Six and three thousandths

ANSWER _____

B Forty-two hundredths

ANSWER _____

C Eight and six hundredths

ANSWER _____

	A	B	C
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



DO NOT CONTINUE
UNTIL TOLD TO DO SO

40.210.3

40.210.3

40.210.3

40.210.3(0.210.3)

40.210.3

40.210.3

40.210.3(0.210.3)

40.210.3

40.210.3

40.210.3

40.210.3

40.210.3

40.210.3

40.210.3

40.210.3

40.210.3

40.210.3

40.210.3

40.210.3

40.210.3

40.210.3

5-A24831-248-2,3

READING GUIDE: PAGES 4 & 5

Categories are listed below.

PAGE 1:

- 11 * 6.003
- 20 * OTHER
- 21 * 6 3/1000
- 22 * 63,000
- 23 * 6300
- 24 * 6.0003
- 25 * 6.02
- 26 * 6.3 OR 6.30
- 77 * I DON'T KNOW.
- 88 * NO RESPONSE

PAGE 2:

- 11 * .0042
- 20 * OTHER
- 21 * 42/10,000
- 22 * 42.000
- 23 * 4200
- 24 * .00042
- 25 * .042
- 26 * THE DIGITS 421 WITH THE DECIMAL IN ANY POSITION TO THE RIGHT OF THE * (.421, .4210, .42000, ETC.)
- 27 * THE DIGITS 421 WITH THE DECIMAL IN ANY POSITION TO THE LEFT OF THE * (.0421, .0421, .00421, ETC.)
- 77 * I DON'T KNOW.
- 88 * NO RESPONSE

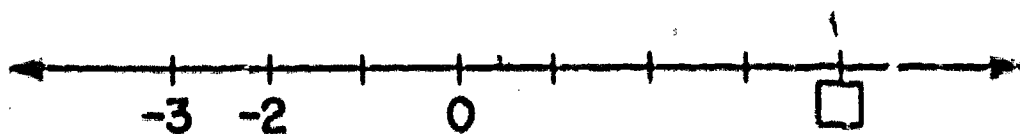
SCORING GUIDE: PART C

Calculator use is limited below.

PART C:

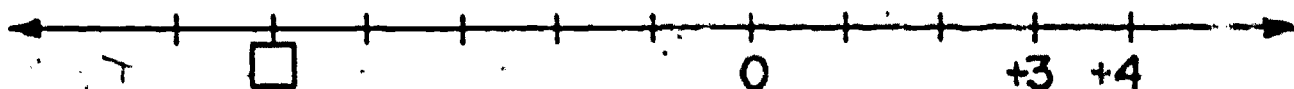
- 11 * 0.00
- 20 * 0.0000
- 21 * 0.6/100
- 22 * 0.0000
- 23 * 0.000
- 24 * 1.00
- 25 * 0.000
- 26 * 0.6 OR 0.600
- 27 * 1.0000 0.000
- 28 * 0.0000000

A. What number should be placed in the ?



ANSWER _____

B. What number should be placed in the ?



ANSWER _____

0000000000

A
00
00
00
00
00
00
00
00
00
00

B
00
00
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53



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RA24423

NAEP #: 04431-02D-23

Content Objective: A. Number and Numeration

Process Objective: Understanding

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{13-15}$	$\frac{17}{10-24}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{36}$	$\frac{17}{36}$

5-A24431-92D-2,3
SCORING GUIDE: PARTS A & B

Categories are listed below.

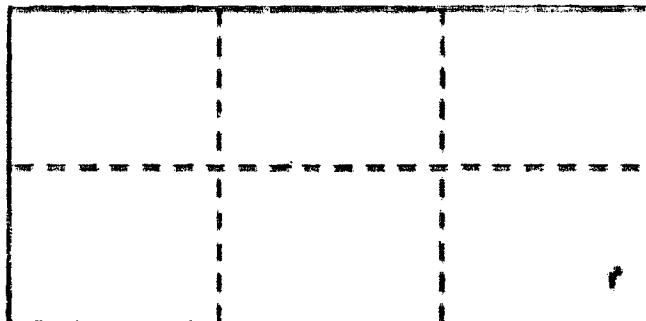
PART A:

- 11 = 4 OR +4
- 20 = OTHER
- 21 = -4
- 22 = 3
- 23 = 5
- 24 = 1
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

PART B:

- 11 = -5
- 20 = OTHER
- 21 = 5
- 22 = -4
- 23 = -6
- 24 = 4
- 25 = 7
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

Shade $\frac{2}{3}$ of the rectangle below.



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98



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: A105430

NAEP #: E-A25432-02D-1

Content Objective: A. Number and Numeration

Process Objective: Understand

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap: $\frac{9}{02-13}$
Package-Exercise:

TOTAL TIME: (in seconds) $\frac{9}{28}$

5-A35432-930-1
SCORING GUIDE

Categories are listed below.

- 11 = ANY FOUR OF THE SIX CELLS SHADED
- 12 = TWO-THIRDS OF THE LARGE RECTANGLE CORRECTLY SHADED IN SOME MANNER OTHER THAN CATEGORY 11
- 13 = OUTLINED 2/3 OF THE RECTANGLE BUT DID NOT SHADE
- 20 = OTHER
- 21 = PARTIAL SHADING IN 4 CELLS
- 22 = TWO OF THE SIX CELLS SHADED OR PARTIALLY SHADED
- 23 = SHADED 2 CELLS AND A PART OF A THIRD CELL
- 24 = 1/2, (3 CELLS) SHADED OR PARTIALLY SHADED
- 25 = 1/6 OR 5/6 (1 OR 5 CELLS) SHADED OR PARTIALLY SHADED
- 77 = I DON'T KNOW.
- 99 = NO RESPONSE

Round the following number to the nearest hundred:

4873

ANSWER _____

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DO NOT CONTINUE
UNTIL TOLD TO DO SO.

80

87

Report #: 4425132

NAEP #: 5-E70009-432-1

Content
Objective: A, Number and Numeration

Process
Objective: Skill in Computation

Exercise Type: Open-ended
Stimulus Type: Text/Text

Overlap:
Package Exercises: $\frac{9}{01-03}$

TOTAL TIME: (in seconds) $\frac{7}{24}$

30

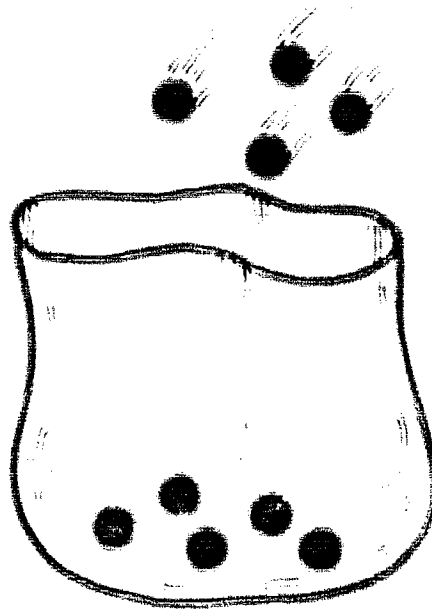
33

1981-82 20303
1977-78 20303
1972-73 20303

S-A25632-43D-1
S-C70009-1
SCORING GUIDE

Categories are listed below.

- 11 * 4500
- 20 * OTHER
- 21 * 4000
- 22 * 5000
- 23 * 4973
- 24 * 900 OR 9
- 25 * 959 OR 99
- 26 * 8, 800 OR CIRCLES 8
- 27 * 4163
- 28 * 5473
- 77 * I DON'T KNOW.
- 88 * NO RESPONSE



This picture shows two sets being put together. What does the picture tell about this picture?

$$\begin{array}{l} \text{○} \quad 5 + 3 = \square \\ \text{○} \quad 3 + 5 = \square \\ \text{●} \quad 5 = 5 = \square \\ \text{○} \quad 5 = \square = 4 \end{array}$$

○ 5 more than 5

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90000



DO NOT CONTINUE
UNTIL TOLD TO DO SO

解：(1) 设 $f(x) = x^2 - 2x + 1$

则 $f'(x) = 2x - 2$

解：(2) 设 $f(x) = x^2 - 2x + 1$

则 $f'(x) = 2x - 2$

解：(3) 设 $f(x) = x^2 - 2x + 1$

则 $f'(x) = 2x - 2$

解：(4) 设 $f(x) = x^2 - 2x + 1$

解：(5) 设 $f(x) = x^2 - 2x + 1$

则 $f'(x) = 2x - 2$

解：(6) 设 $f(x) = x^2 - 2x + 1$

解：(7) 设 $f(x) = x^2 - 2x + 1$

则 $f'(x) = 2x - 2$

解：(8) 设 $f(x) = x^2 - 2x + 1$

则 $f'(x) = 2x - 2$

解：(9) 设 $f(x) = x^2 - 2x + 1$

则 $f'(x) = 2x - 2$

$$\frac{2}{x^2 - 2x + 1}$$

$$\frac{2}{x^2 - 2x + 1}$$

解：(10) 设 $f(x) = x^2 - 2x + 1$

则 $f'(x) = 2x - 2$

$$\frac{2}{x^2 - 2x + 1}$$

$$\frac{2}{x^2 - 2x + 1}$$

ESTIMATE the answer to each of the problems on this and the next pages by writing the appropriate name to complete each power and exponent and indicate the exponent to the power CLOSEST to your estimate.

1. $2.5 \times 10^3 \times 10^4 \times 10^5$

☐ 10^3

☒ 10^4

☐ 10^5

☐ 10^6

☐ Indicate to whom

2. $10^3 \times 10^4 \times 10^5$

☐ 1

☒ 10^3

☐ 10^4

☐ 0

☐ Indicate to whom

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DO NOT CONTINUE
UNTIL TOLD TO DO SO

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DO NOT CONTINUE
UNTIL TOLD TO DO SO

和の平方根 第1

和の平方根 第2

和の平方根 第3

和の平方根 第4

和の平方根 第5

和の平方根 第6

和の平方根 第7

和の平方根 第8

和の平方根 第9

和の平方根 第10

和の平方根 第11

和の平方根 第12

和の平方根 第13

和の平方根 第14

和の平方根 第15

和の平方根 第16

$$\frac{2}{3}$$

$$\frac{4}{5}$$

和の平方根 第17

和の平方根 第18

$$\frac{3}{4}$$

$$\frac{5}{6}$$

Divide.

A. 3 | 304

ANSWER _____

B. 5 $\overline{150}$

ANSWER _____

C.	12	2496
----	----	------

ANSWER _____

A

B

C

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[illegible]

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97

95



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RA32921

NAEP #: 5-A32921-D1D-2

Content Objective: A. Number and Numeration

Process Objective: Skill in Computaton

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap: $\frac{13}{13-16}$
Package-Exercise:

TOTAL TIME: (in seconds) $\frac{13}{68}$

**5-A32921-D1D-2
SCORING GUIDE: PART A**

Categories are listed below.

PART A:

- 11 = $101.\bar{3}$ or 101.33
- 12 = .101 R 1
- 13 = $101 \frac{1}{3}$
- 14 = 101.3, 101.33 OR 101.333...
- 20 = OTHER
- 21 = .00098684 OR OTHER DECIMAL PLACEMENT OR ATTEMPTED
3-DIVIDED BY 304
- 22 = 101.
- 23 = 11, $11 \frac{1}{3}$, 11.33 OR 11 R 1
- 24 = 10.333... OR 1.333 OR OTHER DECIMAL PLACEMENT
- 25 = 101 R 3 OR 101 R 33
- 26 = 3304 OR 3043
- 77 = I DON'T KNOW
- 88 = NO RESPONSE

SCORING GUIDE: PART B

Categories are listed below.

- 11 = 30
- 20 = OTHER
- 21 = 0.0333...
- 22 = .333... AND OTHER DECIMAL PLACEMENT EXCEPT CATEGORY 21
- 23 = 5150 OR 1505
- 24 = 750 OR ATTEMPTED 150×5
- 25 = 3
- 26 = 150 OR 5
- 77 = I DON'T KNOW
- 88 = NO RESPONSE

SCORING GUIDE: PART C

Categories are listed below.

- 11 = .208
- 20 = OTHER
- 21 = 0.0048076 OR ATTEMPTED 12 DIVIDED BY 2496
- 22 = 48076923 OR .48076 OR OTHER DECIMAL PLACEMENT EXCEPT CATEGORY 21
- 23 = 122496 OR 249612
- 24 = 29,952 OR ATTEMPTED 2496 x 12
- 25 = 20.8, 2.08 OR .208
- 26 = 28
- 27 = 2 R 96
- 77 = I DON'T KNOW
- 88 = NO RESPONSE

Report #: RA32921K

NAEP #: 5-A32921K-DID-123

Content Objective: F. Technology

Process Objective: Hand Held Calculator

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:	$\frac{9}{68-16}$	$\frac{13}{11-23}$	$\frac{17}{14-26}$
Package-Exercise:			
TOTAL TIME: (in seconds)	$\frac{9}{93}$	$\frac{13}{68}$	$\frac{17}{48}$

**S-A32921KD1D-1,2,3
SCORING GUIDE: PART A**

Categories are listed below.

PART A:

- 11 = 101.3 or 101.33
- 12 = 101 R 1
- 13 = 101 $\frac{1}{3}$
- 14 = 101.3, 101.33 OR 101.333...
- 20 = OTHER
- 21 = .00098684 OR OTHER DECIMAL PLACEMENT OR ATTEMPTED
3 DIVIDED BY 304
- 22 = 101
- 23 = 11, 11 $\frac{1}{3}$, 11.33 OR 11 R 1
- 24 = 10.333... OR 1.333 OR OTHER DECIMAL PLACEMENT
- 25 = 101 R 3 OR 101 R 33.
- 26 = 3304 OR 3043
- 77 = I DON'T KNOW
- 88 = NO RESPONSE

SCORING GUIDE: PART B

Categories are listed below.

11 = 30

20 = OTHER

21 = 0.0333...

22 = .333... AND OTHER DECIMAL PLACEMENT EXCEPT CATEGORY 21

23 = 3150 OR 1505

24 = 750 OR ATTEMPTED 150×5

25 = 3

26 = 150 OR 5

77 = I DON'T KNOW

88 = NO RESPONSE

SCORING GUIDE: PART C

Categories are listed below.

- 11 = 208**
- 20 = OTHER**
- 21 = 0.0048076 OR ATTEMPTED 12 DIVIDED BY 2496**
- 22 = 48076923 OR .48076 OR OTHER DECIMAL PLACEMENT EXCEPT CATEGORY 21**
- 23 = 122496 OR 249612**
- 24 = 29,952 OR ATTEMPTED 2496×12**
- 25 = 20.8, 2.08 OR .208**
- 26 = 28**
- 27 = 2 R 96**
- 77 = I DON'T KNOW**
- 88 = NO RESPONSE**

5049
3002

The answer to this subtraction problem is closest to:

- ☒ 1000
- ☐ 2000
- ☐ 3000
- ☐ 9000
- ☐ I don't know.

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DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #3 34,34032

Report #3 54,34032-320-123

Content
Description: A. NUMBER AND NUMERATION

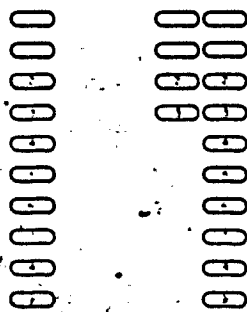
Process
Description: Skill in EXPANSION

Exercise Type: Multiplication/Division
Skill Type: Skill/Type

Overlaps	$\frac{2}{(1144)3}$	$\frac{23}{(1144)3}$	$\frac{27}{(1144)3}$
PROBLEMS: (Skill Expansion)	$\frac{2}{24}$	$\frac{23}{24}$	$\frac{27}{24}$

During a race around the school, Stacy's time was 26 seconds. Tommy's time was 39 seconds. How many seconds faster was Stacy than Tommy?

ANSWER _____



5-A31312-92D-1.2

107

109



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RA34342

NAEP #: 5-A34342-92D-12

Content Objective: A. Number and Numeration

Process Objective: Applications of Routine Problems

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:	$\frac{9}{01-08}$	$\frac{13}{12-03}$
Package-Exercise:		

TOTAL TIME: (in seconds)	$\frac{9}{36}$	$\frac{13}{31}$
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5-A34342-92D-1,2
SCORING GUIDE

Categories are listed below.

- 11 = 13
- 20 = OTHER
- 21 = ATTEMPTED 39 - 26 WITH NO OR WRONG ANSWER
- 22 = 65 OR ATTEMPTED 39 + 26
- 23 = 39
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

Pam has $4\frac{3}{4}$ cups of flour. If she uses $2\frac{1}{2}$ cups to make a cake, how much flour will she have left?

ANSWER _____

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112

110



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RA35241

NAEP #: 5-A35241-92D-23

Content Objective: A. Number and Numeration

Process Objective: Applications of Routine Problems

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{10-18}$	$\frac{17}{12-35}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{34}$	$\frac{17}{34}$

S-A35241-92D-2,3
SCORING GUIDE

Categories are listed below.

- 11 = $2 \frac{1}{4}$ OR 2.25 WITH OR WITHOUT CUPS
- 20 = OTHER
- 21 = $7 \frac{1}{4}$ OR ATTEMPTED $\frac{3}{4} + 2 \frac{1}{2}$
- 22 = $2 \frac{2}{2}$ OR 3
- 23 = $2 \frac{1}{2}$ OR $2 \frac{2}{4}$
- 24 = 2
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

On the same day, the highest temperature at Nome, Alaska, was 28 degrees below zero, and the highest temperature at Miami, Florida, was 78 degrees above zero. What was the difference between the two temperatures?

ANSWER _____

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115

113



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RA36341

NAEP #: 5-A36341-92D-23

Content Objective: A. Number and Numeration

Process Objective: Applications of Real-World Problems

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:	$\frac{11}{70-45}$	$\frac{17}{75-45}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{11}{90}$	$\frac{17}{30}$

S-A36341-92D-2,3
SCORING GUIDE

Categories are listed below.

- 11 = 106**
- 20 = OTHER**
- 21 = 96**
- 22 = 50 OR ATTEMPTED 78 = 28**
- 23 = ATTEMPTED 78 + 28 OR 78 - (-28) WITH NO OR WRONG ANSWER**
- 77 = I DON'T KNOW.**
- 88 = NO RESPONSE**

Six simple addition problems will be read to you. Write only the **ANSWERS** in the spaces provided.

A. _____

B. _____

C. _____

D. _____

E. _____

F. _____

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DO NOT
CONTINUE
UNTIL TOLD
TO DO SO.

Report #: 4436511

NEP #: 5-436511-929-1

Content

Objective: 4. Number and Numeration

Process

Objective: Knowledge of Basic Number Facts

Exercise Type: Open-ended

Stimulus Type: Text

Overlap:

Package-Exercise:

$\frac{9}{(12-1)9}$

TOTAL TIME: (in seconds)

$\frac{9}{42}$

119

117

5-236514-000-1
SCORING GUIDE: PARTS 1 & 2

Categories are listed below.

PART 1:

- 11 = 7
- 20 = OTHER
- 21 = 6 x 1
- 22 = 6
- 23 = 6
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

PART 2:

- 11 = 7
- 20 = OTHER
- 21 = 3 x 4
- 22 = 6
- 23 = 6
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

READING GUIDE: FALL 67

Directions: Read the list below.

TABLE:

- 11 * 3
- 20 * 6788
- 21 * 2 * 7
- 22 * 8
- 23 * 10
- 77 * I DON'T KNOW.
- 88 * NO RESPONSE

TABLE:

- 11 * 14
- 20 * 6788
- 21 * 6 * 8
- 22 * 13
- 23 * 15
- 77 * I DON'T KNOW.
- 88 * NO RESPONSE

NOBLEMAN CODE: PARTS 4 6 7

Categories are listed below.

PAGE 1:

- 11 * 12
- 20 * OTHER
- 21 * 9 * 3
- 22 * 11
- 23 * 13
- 77 * I DON'T KNOW.
- 88 * NO RESPONSE

PAGE 2:

- 11 * 13
- 20 * OTHER
- 21 * 6 * 7
- 22 * 12
- 23 * 14
- 77 * I DON'T KNOW.
- 88 * NO RESPONSE

F. _____



**DO NOT
CONTINUE
UNTIL TOLD
TO DO SO.**

Report #: RA37111

NAEP #: 5-A37111-92D-1

Content
Objective: A. Number and Numeration

Process
Objective: Knowledge of Basic Number Facts

Exercise Type: Open-ended
Stimulus Type: Tape

Overlap:
Package-Exercise: $\frac{9}{05-23}$

TOTAL TIME: (in seconds) $\frac{9}{44}$

122 124

5-A37111-92D-1
SCORING GUIDE: PARTS A & B

Categories are listed below.

PART A:

11 = 6
20 = OTHER
21 = 7 - 1
22 = 5
23 = 7
24 = 8
77 = I DON'T KNOW.
88 = NO RESPONSE

PART B:

11 = 3
20 = OTHER
21 = 8 - 5
22 = 2
23 = 4
24 = 13

77 = I DON'T KNOW.
88 = NO RESPONSE

SCORING GUIDE: PARTS C & D

Categories are listed below.

PART C:

11 = 5
20 = OTHER
21 = 12 - 7
22 = 4
23 = 6
24 = 19
77 = I DON'T KNOW.
88 = NO RESPONSE

PART D:

11 = 7
20 = OTHER
21 = 16 - 9
22 = 6
23 = 8
24 = 25

25 = NOT USED
26 = 5
77 = I DON'T KNOW.
88 = NO RESPONSE

SCORING GUIDE: PARTS E & F

Categories are listed below.

PART E:

- 11 = 7
- 20 = OTHER
- 21 = 9 - 2
- 22 = 6
- 23 = 8
- 24 = 11
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

PART F:

- 11 = 6
- 20 = OTHER
- 21 = 13 - 7
- 22 = 5
- 23 = 7
- 24 = 20
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

George had $\frac{3}{4}$ of a pie. He ate $\frac{2}{5}$ of that. How much pie did he eat?

☐ $\frac{3}{20}$

☐ $\frac{3}{10}$

☐ $\frac{9}{20}$

☐ $\frac{6}{5}$

☐ $\frac{5}{4}$

☐ I don't know.

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1-112211-100-2.2

123



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

126

Report #: RA42241

NAEP #: 5-A42241-920-23

Content Objective: A. Number and Numeration

Process Objective: Applications of Routine Problems

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:
Package-Exercise: $\frac{13}{12-31}$ $\frac{17}{09-16}$

TOTAL TIME: (in seconds) $\frac{13}{37}$ $\frac{17}{28}$

What is the correct placement of the decimal point in each of the following multiplication problems?

A. $76.5 \times 8.23 =$

☐ 629595.

☐ 629.595

☐ 62.9595

☐ 6295.95

☐ I don't know.

B. $.0055 \times 32456$

☐ 17850.80

☐ 17.85080

☐ 1785.080

☐ 178.5080

☐ I don't know.

C. $.3 \times .2 =$

☐ 6.

☐ 60.

☐ .6

☐ .06

☐ I don't know.

130



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

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Report #: RA02832

MEP #: 5-A42832-92D-23

Content Objective: A. Number and Numeration

Process Objective: Skill in Computation

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:
Package-Exercise: $\frac{13}{10-32} \cdot \frac{17}{04-22}$

TOTAL TIME: (in seconds) $\frac{13}{65} \quad \frac{17}{53}$

131

129

A. What is 10% of 50?

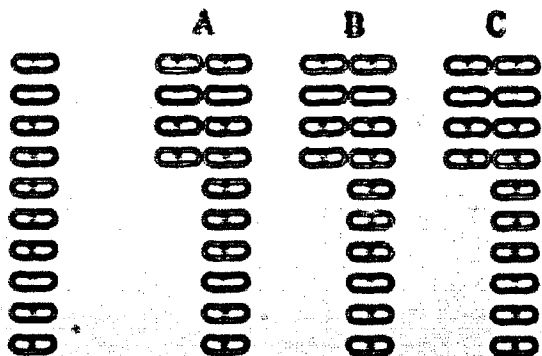
ANSWER _____

B. What is 60% of 50?

ANSWER _____

C. What is 75% of 12?

ANSWER _____



132



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

130

Report #: AA44621

NAEP #: 5-AA44621-010-2

Content Objective: 4. Number and Numeration

Process Objective: Skill in Computation

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap: $\frac{12}{14-13}$
Package-Exercise:
TOTAL TIME: (in seconds) $\frac{12}{37}$

133

131

S:441621-010-2
SCORING GUIDE: PART A

PART A:

- 11 = 1, 5.0 OR EQUIVALENT
- 20 = OTHER
- 21 = 4
- 22 = 10
- 23 = 2
- 24 = 100% WITH OR WITHOUT LABEL
- 25 = 60% WITH OR WITHOUT LABEL
- 26 = 40% WITH OR WITHOUT LABEL
- 27 = 10%
- 28 = 1/3, .2 OR EQUIVALENT
- 29 = 34
- 77 = I DON'T KNOW
- 88 = NO RESPONSE

SCORING GUIDE: PART 2

Categories are listed below.

- 11 * 30
- 20 * OTHER
- 21 * 10 OR 1
- 22 * 9 OR 3.0
- 23 * 60
- 24 * 12
- 25 * 30001 WITH OR WITHOUT LABEL
- 26 * 1204 WITH OR WITHOUT LABEL
- 27 * 1104 OR 114 WITH OR WITHOUT LABEL
- 28 * $\frac{5}{6}$, .83, 50/60, $\frac{6}{5}$, 60/50, $\frac{1}{2}$, $\frac{2}{5}$
- 29 * 304
- 77 * I DON'T KNOW
- 88 * NO RESPONSE

SCORING GUIDE: PART C

Categories are listed below:

- 21 = 2, 3.0 or EQUIVALENT
- 20 = OTHER
- 22 = 25
- 22 = 6
- 23 = 6
- 24 = 3
- 25 = 300% TYPE OF WITHOUT LABEL
- 26 = 37% TYPE OF WITHOUT LABEL
- 27 = 63% TYPE OF WITHOUT LABEL
- 28 = 12/15, 75/12, 1/25 or 15/1
- 29 = 31
- 77 = I DON'T KNOW
- 99 = NO RESPONSE

Which one of the following means "six used as a factor five times"?

☐ 5^6

☐ 6^5

☐ $6 + 6 + 6 + 6 + 6$

☐ $5 + 5 + 5 + 5 + 5 + 5$

☐ I don't know.

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137

134



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RA46232

NAEP #: 5-A46232-92D-23

Content Objective: A. Number and Numeration

Process Objective: Knowledge

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{14-25}$	$\frac{17}{10-13}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{20}$	$\frac{17}{15}$

A store is offering a discount of 15 percent on fishing rods. What is the amount a customer will save on a rod regularly priced at \$25.00?

ANSWER _____

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133

136



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RA47344

NAEP #: 5-C50002-13D-23

Content Objective: A. Number and Numeration

Process Objective: Applications of Routine Problems

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{09-38}$	$\frac{17}{09-08}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{41}$	$\frac{17}{40}$

140

137

5-A47344-42B-2,3
5-C50002-2,3
SCORING GUIDE

Categories are listed below.

- 1 = 33.75, 3.75 OR 375
- 0 = OTHER
- 1 = 21.25 OR OTHER DECIMAL PLACEMENT OR ATTEMPTED $25 \times .85$,
 $25 - (25 \times .15)$ OR $25 - 3.75$
- 2 = 10, 10, -10, 24.85 OR ATTEMPTED $25 - 15$ OR $25 - .15$
- 3 = 15, 15, .15 OR 15
- 4 = 166, 1.66, 1.67, 1.6 OR OTHER DECIMAL PLACEMENT OR ATTEMPTED
 $15 \overline{)25}$
- 5 = .6 OR OTHER DECIMAL PLACEMENT OR ATTEMPTED $25 \overline{)15}$
- 6 = $11.\overline{11}$ OR OTHER DECIMAL PLACEMENT
- 7 = 33.75%, 375 WITHOUT %, OTHER DECIMAL PLACEMENT OF 3.75 OTHER
THAN CATEGORY 11 OR ATTEMPTED $25 \times .15$ WITH NO OR WRONG ANSWER
- 7 = I DON'T KNOW.
- 8 = NO RESPONSE

A store is offering a discount of 15 percent on fishing rods. What is the amount a customer will save on a rod regularly priced at \$25.00?

ANSWER _____

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1-12



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

139

3-A7H1KWD-2.1
3-7-2003-2.1.1

Report #: RA47344K

NAEP #: 5-C50002K-92D-23

Content Objective: F. Technology

Process Objective: Hand Held Calculator

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{11-19}$	$\frac{17}{14-19}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{41}$	$\frac{17}{41}$

5-A47344K92D-2,3
5-C50002K-2,3
SCORING GUIDE

Categories are listed below.

- 1 = 23.75, 3.75 OR 375
- 0 = OTHER
- 1 = 21.25 OR OTHER DECIMAL PLACEMENT OR ATTEMPTED $25 \times .85$,
 $25 - (25 \times .15)$ OR $25 - 3.75$
- 2 = 810, 10, -10, 24.85 OR ATTEMPTED $25 - 15$ OR $25 - .15$
- 3 = 815, 15, .15 OR 15
- 4 = 166, 1.66, 1.67, 1.6 OR OTHER DECIMAL PLACEMENT OR ATTEMPTED
 $15 \overline{) 25}$
- 5 = .6 OR OTHER DECIMAL PLACEMENT OR ATTEMPTED $25 \overline{) 15}$
- 6 = $11.\overline{11}$ OR OTHER DECIMAL PLACEMENT
- 7 = 23.75%, 375 WITHOUT %, OTHER DECIMAL PLACEMENT OF 3.75 OTHER
THAN CATEGORY 11 OR ATTEMPTED $25 \times .15$ WITH NO OR WRONG ANSWER
- 7 = I DON'T KNOW.
- 8 = NO RESPONSE

Six simple multiplication problems will be read to you. Write only the
ANSWERS in the spaces provided.

A. _____

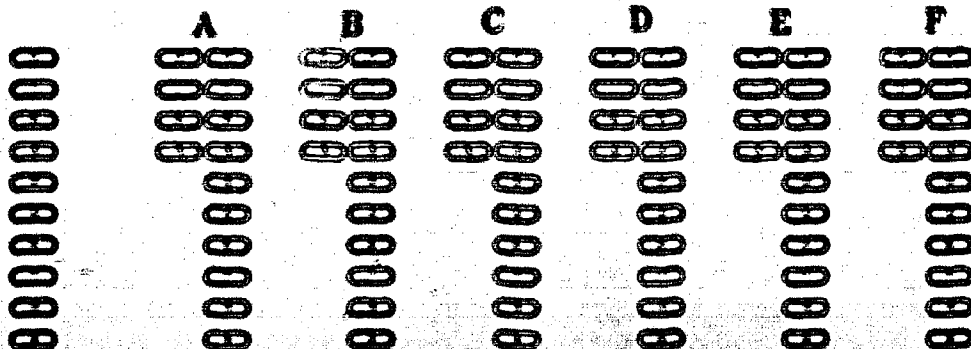
B. _____

C. _____

D. _____

E. _____

F. _____



DO NOT
CONTINUE
UNTIL TOLD
TO DO SO.

Report #: RA47711

NAEP #: 5-A47711-92D-1

Content Objective: A. Number and Numeration

Process Objective: Knowledge of Basic Number Facts

Exercise Type: Open-ended
Stimulus Type: Tape

Overlap:
Package-Exercise: $\frac{2}{31-33}$

TOTAL TIME: (in seconds) $\frac{2}{32}$

5-A47711-92D-1
SCORING GUIDE: PARTS A & B

Categories are listed below.

PART A:

- 11 = 20
- 20 = OTHER
- 21 = 3 X 8
- 22 = 11
- 23 = 5 OR -5
- 24 = 16 OR 32
- 25 = 21 OR 27
- 26 = 38
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

PART B:

- 11 = 48
- 20 = OTHER
- 21 = 8 X 6
- 22 = 14
- 23 = 2 OR -2
- 24 = 42 OR 54
- 25 = 40 OR 56
- 26 = 86
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

MOBILE GUIDE: PARTS C & D

Categories are listed below.

PART C:

- 11 = 20
- 20 = OTHER
- 21 = 1 1 5
- 22 = 9
- 23 = 1 02 -1
- 24 = 15 01 25
- 25 = 16 01 20
- 26 = 43
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

PART D:

- 11 = 20
- 20 = OTHER
- 21 = 7 1 4
- 22 = 11
- 23 = 3 02 -3
- 24 = 24 01 32
- 25 = 21 01 35
- 26 = 70
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

SCORING GUIDE: PARTS 1 & 2

Categories are listed below.

PART 1:

- 11 = 10
- 20 = OTHER
- 21 = 2 1 3
- 22 = 11
- 23 = 7 OR -7
- 24 = 9 OR 27
- 25 = 16 OR 20
- 26 = 29
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

PART 2:

- 11 = 42
- 20 = OTHER
- 21 = 6 1 7
- 22 = 13
- 23 = 1 OR -1
- 24 = 35 OR 49
- 25 = 36 OR 41
- 26 = 67
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

Which one of the following is the same as $8 + 7$?

☐ A. 15

☐ B. 8×7

☐ C. $8 + 7 \times 7 + 7$

☐ D. 14

☐ E. I don't know.

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DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RA47832

NAEP #: 5-A47832-92D-1

Content
Objective: A. Number and Numeration

Process
Objective: Knowledge

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap: .
Package-Exercise: $\frac{9}{01-07}$

TOTAL TIME: (in seconds) $\frac{9}{26}$

An army bus holds 36 soldiers. If 1128 soldiers are being bused to their training site, how many buses are needed?

ANSWER _____

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152

149



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RA48221

NAEP #: 5-A48221-920-2

Content Objective: A. Number and Numeration

Process Objective: Applications of Routine Problems

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap: $\frac{13}{10-37}$
Package-Exercise:

TOTAL TIME: (in seconds) $\frac{13}{-5}$

153

150

3-A48221-92D-2
SCORING GUIDE

Categories are listed below.

- 1 = 32 BUSES OR 32
- 0 = OTHER
- 1 = $31.33\bar{3}$, $31 \frac{1}{3}$, 31×12 OR ATTEMPTED $36 \overline{)1128}$
- 2 = .0319148 OR OTHER DECIMAL PLACEMENT OR ATTEMPTED $1128 \overline{)36}$
- 3 = 1164 OR ATTEMPTED $1128 \div 36$
- 4 = 1092 OR ATTEMPTED $1128 - 36$
- 5 = 31
- 6 = $40,608$ OR ATTEMPTED 1128×36
- 7 = I DON'T KNOW.
- 8 = NO RESPONSE

An army bus holds 36 soldiers. If 1128 soldiers are being bused to their training site, how many buses are needed?

ANSWER _____

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155

152



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

1-A16231K92D-2.2

Report #: RA4221K

NAEP #: 5-A4221K-920-23

Content Objective: F. Technology

Process Objective: Hand Held Calculator

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{11-18}$	$\frac{17}{14-18}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{45}$	$\frac{17}{35}$

156

153

5-A48221K92D-2,3
SCORING GUIDE

Categories are listed below.

- 1 = 32 BUCKS OR 32
- 0 = OTHER
- 1 = $31.33\bar{3}$, $31 \frac{1}{3}$, $31 \text{ R } 12$ OR ATTEMPTED $36 \overline{)1128}$
- 2 = .0319148 OR OTHER DECIMAL PLACEMENT OR ATTEMPTED $1128 \overline{)36}$
- 3 = 1168 OR ATTEMPTED $1128 \div 36$
- 4 = 1092 OR ATTEMPTED $1128 - 36$
- 5 = 31
- 6 = 80,608 OR ATTEMPTED 1128×36
- 7 = I DON'T KNOW.
- 8 = NO RESPONSE

Which one of the following numbers is GREATER than $\frac{1}{3}$ but LESS than $\frac{3}{4}$?

☐ $\frac{1}{5}$

☐ $\frac{1}{4}$

☐ $\frac{1}{2}$

☐ $\frac{5}{12}$

☐ I don't know.

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158



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

1-800-441-4444
1-800-441-4444

155

Report #: RA51932

NAEP #: 5-C20023-43D-23

Content Objective: A. Number and Numeration

Process Objective: Knowledge

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{68-62}$	$\frac{17}{11-52}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{89}$	$\frac{17}{75}$

159

156

Arrange the given numbers from LEAST to GREATEST.

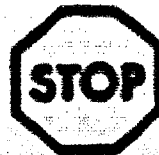
0.07, 0.4, 0.23, 0.009, 0.1

LEAST _____ GREATEST

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160



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

157

Report #: RA52132

NAEP #: 5-A52132-92D-23

Content Objective: 4. Number and Numeration

Process Objective: Knowledge

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap: $\frac{17}{12-17}$ $\frac{17}{07-24}$
Package-Exercise:

TOTAL TIME: (in seconds) $\frac{13}{39}$ $\frac{17}{38}$

161

158

5-A52132-92D-7,3
SCORING GUIDE

Categories are listed below.

- 11 = 0.009, 0.07, 0.1, 0.23, 0.4**
- 20 = OTHER**
- 21 = .009, .23, .07, .4, .1**
- 22 = .07, .07, .23, .4, .1**
- 23 = 0.1, 0.4, 0.07, 0.23, 0.009**
- 24 = 0.1, 0.4, 0.07, 0.009, 0.23**
- 25 = .23, .009, .07, .4, .1**
- 26 = 0.4, 0.23, 0.1, 0.07, 0.009**
- 27 = .009, .07, .23, .1, .4**
- 28 = .009, .07, .1, .4, .23**
- 77 = I DON'T KNOW.**
- 88 = NO RESPONSE**

The integers are the numbers

$\dots, -3, -2, -1, 0, 1, 2, 3, \dots$

If a and b are integers, then

<p>A. $a + b$ is an integer.</p> <p>Always <input checked="" type="radio"/> Sometimes <input type="radio"/> Never <input type="radio"/> I don't know <input type="radio"/></p>
<p>B. $a - b$ is an integer.</p> <p>Always <input checked="" type="radio"/> Sometimes <input type="radio"/> Never <input type="radio"/> I don't know <input type="radio"/></p>
<p>C. $a \cdot b$ is an integer.</p> <p>Always <input checked="" type="radio"/> Sometimes <input type="radio"/> Never <input type="radio"/> I don't know <input type="radio"/></p>
<p>D. $a \div b$ is an integer.</p> <p>Always <input type="radio"/> Sometimes <input checked="" type="radio"/> Never <input type="radio"/> I don't know <input type="radio"/></p>

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163



DO NOT CONTINUE
UNTIL TOLD TO DO SO

160

ਅੰਕ ੧: ਅੰਕ ੨

ਅੰਕ ੩: ਅੰਕ ੪-੫-੬-੭-੮-੯

ਅੰਕ ੧੦: ਅੰਕ ੧੧-੧੨-੧੩-੧੪-੧੫-੧੬-੧੭-੧੮-੧੯-੨੦

ਅੰਕ ੨੧: ਅੰਕ ੨੨-੨੩-੨੪-੨੫-੨੬-੨੭-੨੮-੨੯-੩੦

ਅੰਕ ੩੧: ਅੰਕ ੩੨-੩੩-੩੪-੩੫-੩੬-੩੭-੩੮-੩੯-੪੦

ਅੰਕ ੪੧: ਅੰਕ ੪੨-੪੩-੪੪-੪੫-੪੬-੪੭-੪੮-੪੯-੫੦

ਅੰਕ ੫੧: ਅੰਕ ੫੨-੫੩-੫੪-੫੫-੫੬-੫੭-੫੮-੫੯-੬੦

ਅੰਕ ੬੧: ਅੰਕ ੬੨-੬੩-੬੪-੬੫-੬੬-੬੭-੬੮-੬੯-੭੦

ਅੰਕ ੭੧: ਅੰਕ ੭੨-੭੩-੭੪-੭੫-੭੬-੭੭-੭੮-੭੯-੮੦

ਅੰਕ ੮੧: ਅੰਕ ੮੨-੮੩-੮੪-੮੫-੮੬-੮੭-੮੮-੮੯-੯੦

Jason bought 3 boxes of pencils. What else do you need to know to find out how many pencils he bought?

ANSWER _____

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165



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

162

Report #: RA70443

NAEP #: 5-A70443-92D-12

Content
Objective: A. Number and Numeration

Process
Objective: Understanding

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:
Package-Exercise: $\frac{9}{04-21}$

TOTAL TIME: (in seconds) $\frac{9}{32}$

166

165

5-A70443-92D-1
SCORING GUIDE

Categories are listed below.

- 11 = NEED TO KNOW HOW MANY PENCILS IN A BOX
- 20 = OTHER
- 21 = HOW MANY PENCILS, HOW MANY, HOW MANY IN THE BOXES
- 22 = HOW MUCH THEY COST, HOW MUCH MONEY, ETC.
- 23 = COUNT THEM
- 24 = NAMES AN OPERATION: DIVIDE, SUBTRACT, ETC.
- 25 = 3, THREE AND OTHER NUMERIC ANSWERS
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

Report #: RA71443

NAEP #: 5-A71443-92D-23

Content Objective: A. Number and Numeration

Process Objective: Applications of Routine Problems

Exercise Type: Open-ended

Stimulus Type: Text/Tape

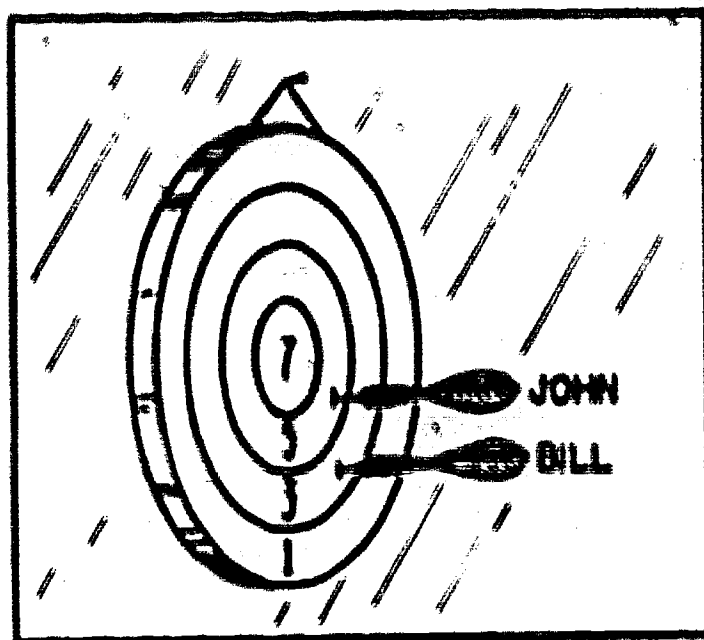
Overlap:	$\frac{13}{12-07}$	$\frac{17}{13-29}$
Package-Exercise:		

TOTAL TIME: (in seconds)	$\frac{13}{105}$	$\frac{17}{86}$
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**5-A71443-92D-2,3
SCORING GUIDE**

Categories are listed below.

- 11 = 20--10¢ AND 3--16¢ STAMPS WITH NO CORRECT EQUATIONS, AND NO CORRECT PAIR OF EQUATIONS
- 12 = 20--10¢ STAMPS AND 3--16¢ STAMPS WITH INDICATION OF 3×16 OR $16 \div 16 \div 16$
- 13 = 20--10¢ STAMPS AND 3--16¢ STAMPS WITH A CORRECT EQUATION: I.E., $10X + (23 - X) 16 = 248$, $10(23 - X) + 16X = 248$ OR EQUIVALENT, OR A CORRECT PAIR OF EQUATIONS SUCH AS $10X + 16Y = 248$ AND $X + Y = 23$ OR EQUIVALENT
- 20 = OTHER
- 21 = 12--10¢ STAMPS AND 8--16¢ STAMPS; OR 4--10¢ STAMPS AND 13--16¢ STAMPS.
- 22 = THE SUM OF THE 10¢ AND 16¢ STAMPS IS 23 (EXCEPT FOR CATEGORIES 11, 12 OR 13); 11--10¢ STAMPS AND 12--16¢ STAMPS; 13--10¢ STAMPS AND 10--16¢ STAMPS
- 23 = WROTE $10X + 16Y = 248$ OR EQUIVALENT WITH NO OR WRONG ANSWER OR $X + Y = 23$ OR EQUIVALENT WITH NO OR WRONG ANSWER
- 24 = WROTE CORRECT NUMBERS IN WRONG LINES. 3--10¢ STAMPS AND 20--16¢ STAMPS
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE



John threw a dart that landed in the 5 area. Bill threw a dart that landed in the 3 area. Each boy has one more dart to throw. It is now John's turn. Where are the possible places that John can throw his dart so that Bill cannot tie or beat him?

- ☒ In the 7 area only
- ☐ In the 7 or in the 5 area only
- ☐ In the 7, in the 5, or in the 3 area
- ☐ John can't be sure to win after his throw. He has to wait until Bill throws his dart.
- ☐ I don't know.



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

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Report #: RAY2043

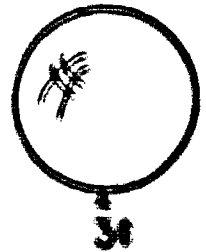
NAEP #: 5-A72043-92D-12

Content Objective: A. Number and Numeration

Process Objective: Applications of Non-Routine Problems

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:	$\frac{9}{03-17}$	$\frac{13}{08-20}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{9}{94}$	$\frac{13}{69}$



Joyce has 50¢. Which of the following can she buy?

- ☐ 3 candy bars and a pencil
- ☐ 4 ice cream cones and a candy bar
- ☐ 5 apples and 3 balloons
- ☐ 3 apples and 3 ice cream cones
- ☐ I don't know.

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173

170



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RA80944

NAEP #: 5-A80944-92D-12

Content

Objective: A. Number and Numeration

Process

Objective: Applications of Routine Problems

Exercise Type: Multiple-choice

Stimulus Type: Text/Tape

Overlap:

Percentage-Exercise:

$$\frac{9}{62-65}$$

$$\frac{12}{68-72}$$

TOTAL TIME: (in seconds)

$$\frac{9}{73}$$

$$\frac{12}{64}$$

174

171

Suppose you want to bake some cakes for a party. Two cake recipes require the following amounts of flour:

Pineapple Swirl Cake

$2\frac{1}{2}$ cups flour

Chocolate Velvet Cake

$2\frac{1}{2}$ cups flour

How much flour will be needed to make three Pineapple Swirl Cakes and two Chocolate Velvet Cakes?

☐ $4\frac{2}{3}$

☐ 7

☐ $10\frac{2}{3}$

☐ 12

☐ $12\frac{1}{6}$

☐ I don't know.



175



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

172

Report #: 4481012

ADP #: 5-481012-020-23

Content Objective: 4. Number and Numeration

Process Objective: Applications of routine problems

Exercise Type: Multiple-choice
Assessment Type: Test/Task

Overlaps	$\frac{17}{0.125}$	$\frac{17}{1.125}$
Including Exercises	$\frac{17}{64}$	$\frac{17}{62}$
TOTAL TIME: (in seconds)	$\frac{17}{64}$	$\frac{17}{62}$

T. T. MORROW 1234567890 1234567890		STATEMENT OF ACCOUNT FOR THE MONTH OF JANUARY 1968	
T. T. MORROW 1234567890		1234567890	
DATE	DEBIT	CREDIT	BALANCE
1-1	10.00	10.00	10.00
1-2	20.00	10.00	20.00
1-3	10.00	10.00	30.00
1-4	20.00	10.00	40.00
1-5	10.00	10.00	50.00
1-6	20.00	10.00	60.00
1-7	10.00	10.00	70.00
1-8	20.00	10.00	80.00
1-9	10.00	10.00	90.00
1-10	20.00	10.00	100.00
1-11	10.00	10.00	110.00
1-12	20.00	10.00	120.00
1-13	10.00	10.00	130.00
1-14	20.00	10.00	140.00
1-15	10.00	10.00	150.00
1-16	20.00	10.00	160.00
1-17	10.00	10.00	170.00
1-18	20.00	10.00	180.00
1-19	10.00	10.00	190.00
1-20	20.00	10.00	200.00
1-21	10.00	10.00	210.00
1-22	20.00	10.00	220.00
1-23	10.00	10.00	230.00
1-24	20.00	10.00	240.00
1-25	10.00	10.00	250.00
1-26	20.00	10.00	260.00
1-27	10.00	10.00	270.00
1-28	20.00	10.00	280.00
1-29	10.00	10.00	290.00
1-30	20.00	10.00	300.00
1-31	10.00	10.00	310.00
1-32	20.00	10.00	320.00
1-33	10.00	10.00	330.00
1-34	20.00	10.00	340.00
1-35	10.00	10.00	350.00
1-36	20.00	10.00	360.00
1-37	10.00	10.00	370.00
1-38	20.00	10.00	380.00
1-39	10.00	10.00	390.00
1-40	20.00	10.00	400.00
1-41	10.00	10.00	410.00
1-42	20.00	10.00	420.00
1-43	10.00	10.00	430.00
1-44	20.00	10.00	440.00
1-45	10.00	10.00	450.00
1-46	20.00	10.00	460.00
1-47	10.00	10.00	470.00
1-48	20.00	10.00	480.00
1-49	10.00	10.00	490.00
1-50	20.00	10.00	500.00
1-51	10.00	10.00	510.00
1-52	20.00	10.00	520.00
1-53	10.00	10.00	530.00
1-54	20.00	10.00	540.00
1-55	10.00	10.00	550.00
1-56	20.00	10.00	560.00
1-57	10.00	10.00	570.00
1-58	20.00	10.00	580.00
1-59	10.00	10.00	590.00
1-60	20.00	10.00	600.00
1-61	10.00	10.00	610.00
1-62	20.00	10.00	620.00
1-63	10.00	10.00	630.00
1-64	20.00	10.00	640.00
1-65	10.00	10.00	650.00
1-66	20.00	10.00	660.00
1-67	10.00	10.00	670.00
1-68	20.00	10.00	680.00
1-69	10.00	10.00	690.00
1-70	20.00	10.00	700.00
1-71	10.00	10.00	710.00
1-72	20.00	10.00	720.00
1-73	10.00	10.00	730.00
1-74	20.00	10.00	740.00
1-75	10.00	10.00	750.00
1-76	20.00	10.00	760.00
1-77	10.00	10.00	770.00
1-78	20.00	10.00	780.00
1-79	10.00	10.00	790.00
1-80	20.00	10.00	800.00
1-81	10.00	10.00	810.00
1-82	20.00	10.00	820.00
1-83	10.00	10.00	830.00
1-84	20.00	10.00	840.00
1-85	10.00	10.00	850.00
1-86	20.00	10.00	860.00
1-87	10.00	10.00	870.00
1-88	20.00	10.00	880.00
1-89	10.00	10.00	890.00
1-90	20.00	10.00	900.00
1-91	10.00	10.00	910.00
1-92	20.00	10.00	920.00
1-93	10.00	10.00	930.00
1-94	20.00	10.00	940.00
1-95	10.00	10.00	950.00
1-96	20.00	10.00	960.00
1-97	10.00	10.00	970.00
1-98	20.00	10.00	980.00
1-99	10.00	10.00	990.00
1-100	20.00	10.00	1000.00

A. How much money does T. T. Morrow currently have in this account?

- ☒ \$ 80.51
- ☐ \$175.00
- ☐ \$513.12
- ☐ \$636.61
- ☐ I don't know.

B. What is the total amount of debts this month?

- ☐ \$ 80.51
- ☐ \$175.00
- ☐ \$513.12
- ☒ \$636.61
- ☐ I don't know.



DO NOT CONTINUE
UNTIL TOLD TO DO SO

177

174

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ନିମ୍ନଲିଖିତ କ୍ରମ: ୧୫୫୦୧୫

ନିମ୍ନଲିଖିତ କ୍ରମ: ୧୫୫୦୧୫

ନିମ୍ନଲିଖିତ କ୍ରମ: ୧୫୫୦୧୫

ନିମ୍ନଲିଖିତ କ୍ରମ: ୧୫୫୦୧୫

ନିମ୍ନଲିଖିତ କ୍ରମ: ୧୫୫୦୧୫

ନିମ୍ନଲିଖିତ କ୍ରମ: ୧୫୫୦୧୫

ନିମ୍ନଲିଖିତ କ୍ରମ: ୧୫୫୦୧୫

Linda's new bike cost \$159.99 and the sales tax was 5%. How much did she pay including tax?

☐ \$164.99

☒ \$167.99

☐ \$172.98

☐ \$177.99

☐ I don't know.

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179



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

176

Report #: RA91944

NAEP #: 5-A91944-92D-3

Content
Objective: A. Number and Numeration

Process
Objective: Applications of Routine Problems

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap: $\frac{17}{11-09}$
Package-Exercise:

TOTAL TIME: (in seconds) $\frac{17}{69}$

180

177

SALES TAX COLLECTION CHART

Amount of Sale	Total
\$.01 to \$.18	\$.00
.19 to .51	.03
.52 to .84	.06
.85 to 1.18	.09
1.19 to 1.51	.12
1.52 to 1.84	.15
1.85 to 2.18	.18
2.19 to 2.51	.21
2.52 to 2.84	.24
2.85 to 3.18	.27
3.19 to 3.51	.30
3.52 to 3.84	.33
3.85 to 4.18	.36
4.19 to 4.51	.39
4.52 to 4.84	.42
4.85 to 5.18	.45

Amount of Sale	Total
\$ 5.19 to 5.51	\$.48
5.52 to 5.84	.51
5.85 to 6.18	.54
6.19 to 6.51	.57
6.52 to 6.84	.60
6.85 to 7.18	.63
7.19 to 7.51	.66
7.52 to 7.84	.69
7.85 to 8.18	.72
8.19 to 8.51	.75
8.52 to 8.84	.78
8.85 to 9.18	.81
9.19 to 9.51	.84
9.52 to 9.84	.87
9.85 to 10.18	.90

182

179

DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RA94123

NAEP #: 5-P00601-A3D-23

Content Objective: E. Probability and Statistics

Process Objective: Skill

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{12-41}$	$\frac{17}{12-06}$
Package-Exercise:		

TOTAL TIME: (in seconds)	$\frac{13}{152}$	$\frac{17}{148}$
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183

180

1981-82 T1241 S1206
1977-78 T0340 S1104
1972-73 T0326 S1113

5-A94123-45D-2,3
5-P00001-2,3

SCORING GUIDE: PARTS A & B

Categories are listed below.

PART A:

- 11 = 2.09
- 12 = .09
- 13 = 9¢
- 15 = 3.99, .99 OR 99¢
- 20 = OTHER
- 21 = 9, .09¢ OR 8.09
- 23 = 99
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

PART B:

- 11 = 2.63
- 12 = .63
- 13 = 63¢
- 15 = 27.52, 7.52 OR 752¢
- 20 = OTHER
- 21 = 63 OR .63¢
- 23 = 752
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

SCORING GUIDES: PARTS C & D

Categories are listed below.

PART C:

- 11 = 21.11
- 12 = 1.11
- 13 = 1111
- 14 = 21.08, 1.08, or 1088
- 15 = 213.43, 213.46, 13.43, 13.46, 13438 or 13468
- 20 = OTHER
- 21 = 111 OR 21.118
- 22 = 108 OR 1.088
- 23 = 1343 OR 1346
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

PART D:

- 11 = 2.54
- 12 = .54
- 13 = 548
- 15 = 26.54, 6.54 OR 6548
- 20 = OTHER
- 21 = 54 OR 2.548
- 23 = 654
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

SCORING GUIDE: PART 2

Categories are listed below.

PART 2:

11 = 1.21

12 = .1.21

13 = 812

15 = 25.78, 9.78 OR 9782

20 = OTHER

21 = 81 OR 5.812

23 = 978

77 = I DON'T KNOW.

88 = NO RESPONSE

Which one of the following is a quadratic equation?

☐ $3x^4 + 4x^2 = 8$

☒ $x^2 + 7x + 9 = 0$

☐ $2x + 15 = 6$

☐ $3x + 16 = 17$

☐ I don't know.

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187

184



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: 10010211

Author #: 10010211-020-3

Country: 10010211-020-3

Country: 10010211-020-3

Country: 10010211-020-3

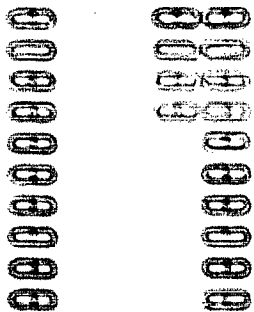
Country: 10010211-020-3

Country: 10010211-020-3

$$44 \times 5 = 220$$

Solve this equation for x.

ANSWER _____



189



DO NOT CONTINUE
UNTIL TOLD TO DO SO

186

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第 23 页

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第 28 页

第 28 页

5-844325-929-3
SCORING GUIDE

Answers are listed below.

1 = $E = \frac{C + 2}{1} = 2$ or $(C + 2 = 2)$ DIVIDED BY 1 OR EQUIVALENT

2 = SAME

3 = PARTIAL INTERPRETATION, COMPLETELY CORRECT. NOT FINISHED SUCH AS:
 $E = 2/1 = \frac{C + 2}{1}$ OR $E = C + 2 = 2$ OR $E = 2 = C + 2$

4 = 2 OR $E = 2$

5 = 1 OR $E = 1$

6 = $\frac{C + 2}{2}$

7 = $C + 2 = 2/1 = 2$ OR $2/1 = C + 2 = 2$

8 = E DOESN'T EXIST.

9 = NO RESPONSE

RECEIVED
JAN 10 1967

44-38861-1

10-11-68

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192



DO NOT CONTINUE
UNTIL TOLD TO DO SO

● 1980年，中国开始实行改革开放政策。

130

Report #: RB23025

NAEP #: 5-H11025-43D-23

Content
Objective: B. Variables and Relationships

Process
Objective: Skill in Manipulating

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{09-40}$	$\frac{17}{11-04}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{62}$	$\frac{17}{59}$

5-B23025-43D-2,3
5-H11025-2,3
SCORING GUIDE

Categories are listed below.

- 11 = 6
- 12 = 6 OR LARGER, 6 OR GREATER
- 20 = OTHER, $(6 + 3)$ OR $9 + 3 = 12$
- 21 = $(6, 7, 8, 9, \dots)$, 6, 7, ..., 6..., 6 OR 7
- 22 = 9, 9 OR MORE, $(9, 10, 11, \dots)$ OR 9, 10, 11...
- 23 = 7, $(7, 8, 9, \dots)$ OR 7, 8, 9...
- 24 = 12, 12 OR MORE, $(12, 13, \dots)$ OR 12, 13, 14...
- 25 = 3, 3 OR MORE OR $(3, 4, 5, \dots)$
- 26 = NUMBER GREATER THAN SIX OTHER THAN CATEGORIES 22, 23 OR 24
- 27 = GREATER THAN 6
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

Dick drove his parents' car from his house to his grandfather's farm at 40 mph. He returned by bicycle at 8 mph. If the entire trip took 3 hours, how far is it from his house to his grandfather's farm?

ANSWER _____

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195

192



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: KB25142

NAEP #: 5-825142-92D-3

Content
Objective: B. Variables and Relationships

Process
Objective: Applications of Routine Problems

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap: 17
Package-Exercise: 07-20

TOTAL TIME: (in seconds) 17
108

5-325142-92D-3
SCORING GUIDE

Categories are listed below.

- 11 = 20 MILES OR 20
- 20 = OTHER
- 21 = 60 OR 12
- 22 = 120 OR ATTEMPTED 40×3
- 23 = 24 OR ATTEMPTED 8×3
- 24 = 48, 51 OR ATTEMPTED $40 + 8$ OR $40 + 8 + 3$
- 25 = 5 OR ATTEMPTED 40 DIVIDED BY 8
- 26 = 144 OR ATTEMPTED $(40 + 8) \times 3$
- 27 = WROTE ONE OF THE FOLLOWING EQUATIONS: $x = 40y$, $x = 8(3 - y)$, $x + y = 3$, $40x = 8y$, OR OTHER INCORRECT EQUATIONS
- 28 = WROTE CORRECT EQUATION OR PAIR OF EQUATIONS WITH NO OR WRONG ANSWER; E.G., $\frac{x}{40} + \frac{x}{8} = 3$, $x = 40y$ AND $x = 8(3 - y)$,
 $x + y = 3$ AND $40x = 8y$, $40x = 8(3 - x)$ OR $40(3 - x) = 8x$
- 29 = $1/2$, $2 \frac{1}{2}$, $1/2$ AND $2 \frac{1}{2}$ WITH NO WORK OR WORK OTHER THAN CATEGORY 28
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

$$144 = \square \times 8$$

What number should go in the \square to make this number sentence TRUE?

ANSWER _____

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195



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

195

Report #: R25625

NAEP #: 5-825625-920-2

Content Objective: B. Variables and Relationships

Process Objective: Skill in Manipulating

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:
Package-Exercise: $\frac{13}{13-31}$

TOTAL TIME: (in seconds) $\frac{13}{29}$

S-B35625-92D-2

SCORING GUIDE

Categories are listed below.

- 11 = 18
- 20 = OTHER
- 21 = ATTEMPTED 144 DIVIDED BY 8 WITH NO OR WRONG ANSWER
- 22 = 1152 OR ATTEMPTED 144 \times 8
- 23 = 152 OR ATTEMPTED 144 \div 8
- 24 = 136 OR ATTEMPTED 144 - 8
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

A. $\frac{x^3 \cdot x^2}{x^5} =$

☐ x^{-1}

☐ x^7

☒ x^{10}

☐ x^{15}

☐ $12x$

☐ $35x$

☐ I don't know.

B. $\frac{x^2}{x^{10}} =$

☐ x^8

☐ x^{-8}

☒ x^{-10}

☐ x^{10}

☐ x^{12}

☐ $\frac{1}{x^8}$

☐ $\frac{1}{x^{10}}$

☐ I don't know.

0000000000



DO NOT CONTINUE
UNTIL TOLD TO DO SO

201

198

Report #: 1030125

NAEP #: 5-030125-020-3

Content:

Objective: B. Variables and Relationships

Process:

Objective: Skill in Manipulating

Exercise Type: Multiple-choice

Stimulus Type: Text/Tape

Overlap:

Package-Exercise:

$\frac{17}{69-27}$

TOTAL TIME: (in seconds)

$\frac{17}{42}$

REPORT #3

REVISION 7

WEEK #3

5-10-1977-020-2

CONCEPT

CONCEPT #3

2. WORKING WITH THE CONCEPTS

CONCEPT

CONCEPT #3

APPLICATIONS OF CONCEPTS

CONCEPT #3

APPLICATIONS

CONCEPT #3

CONCEPT #3

CONCEPT

CONCEPT #3

23
11/27/77

CONCEPT #3 (CONCEPT #3)

23
11/27/77

Which of the following numbers could be written in the form $4m+3$ where m is a counting number?

☐ 25

☐ 28

☒ 31

☐ 80

☐ I don't know.

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3-H10932-92D-3

202

205



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RB#0932

NAEP #: 5-B40932-92D-3

Content
Objective: B. Variables and Relationships

Process
Objective: Applications of Non-Routine Problems

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:
Package-Exercise: $\frac{17}{13-16}$

TOTAL TIME: (in seconds) $\frac{17}{48}$

206

203

If $y = \frac{5}{x}$, what happens to y as x increases?

- ☐ y increases.
- ☐ y decreases.
- ☐ y remains the same.
- ☐ I don't know.

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DO NOT CONTINUE
UNTIL TOLD TO DO SO.

207

204

Report #: RB41832

NAEP #: 5-B41832-92D-3

Content
Objective: B. Variables and Relationships

Process
Objective: Understanding

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:
Package-Exercise: $\frac{17}{09-15}$

TOTAL TIME: (in seconds) $\frac{17}{34}$

208

205

In a coordinate plane a rectangle has vertices at the points $(-2, 3)$, $(-2, -2)$, $(12, -2)$ and $(12, 3)$. What is the area of this rectangle?

☐ 38

☐ 50

☐ 70

☐ 84

☐ I don't know.

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209

206



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RB51223

NAEP #: 5-B51223-92D-3

Content
Objective: B. Variables and Relationships

Process
Objective: Applications of Routine Problems

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:
Package-Exercise: $\frac{17}{09-23}$

TOTAL TIME: (in seconds) $\frac{17}{04}$

Ed weighs more than Linda and is shorter than Peter. Peter weighs less than Linda and is also shorter than Linda.

A. Who is the tallest?

- ☐ Ed
- ☐ Peter
- ☒ Linda
- ☐ I don't know.

B. Who is the heaviest?

- ☒ Ed
- ☐ Peter
- ☐ Linda
- ☐ I don't know.

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DO NOT CONTINUE
UNTIL TOLD TO DO SO.

211

208

LBNM-DID-4

Report #: 5870246

NAEP #: 5-570246-D15-2

Content Objective: B. Variables and Relationships

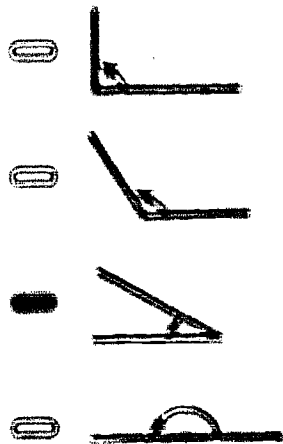
Process Objective: Application of Reasoning and Judgment

Exercise Type: Multiple-choice
Stimulus Type: Text/Graph

Overlap:
Package-Exercise: $\frac{13}{14-29}$

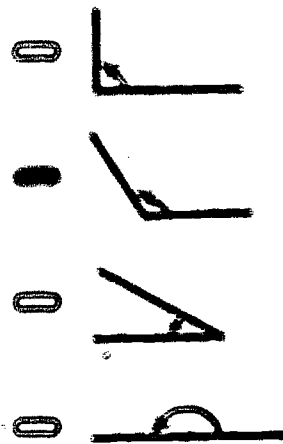
TOTAL TIME: (in seconds) $\frac{13}{68}$

A. Which figure shows an acute angle?



☐ I don't know.

B. Which figure shows an obtuse angle?



☐ I don't know.



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

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(Continued)

C. Which figure shows a straight angle?



☐ I don't know.



DO NOT CONTINUE
UNTIL TOLD TO DO SO

Report #: KC N0111

NAEP #: 50010111-92D-2

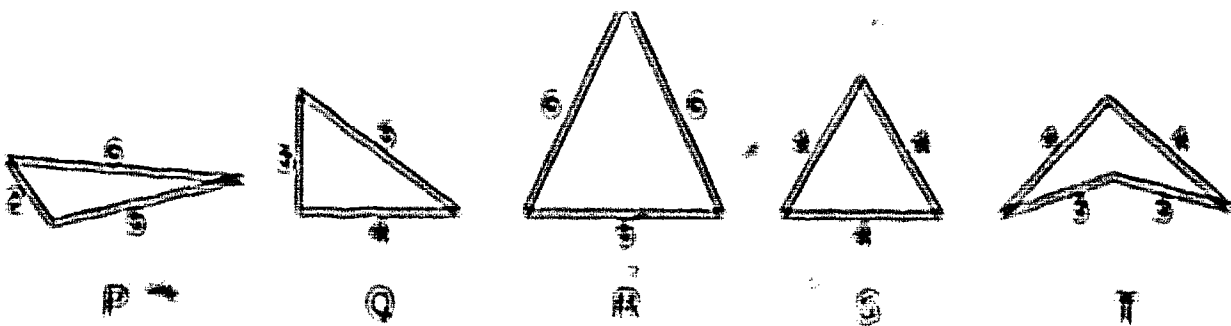
Content Objective: C. Shape, Size and Position

Process Objective: Knowledge

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

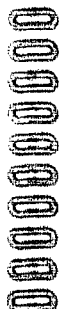
Overlap: $\frac{13}{12=32}$
Package-Exercise:

TOTAL TIME: (in seconds) $\frac{13}{20}$



Which figures show a scalene?

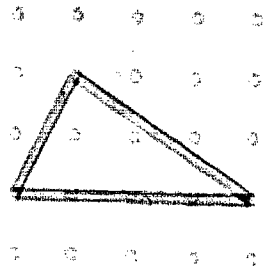
- ☐ Figures P and Q only
- ☐ Figures P, R and S only
- ☐ All of the figures
- ☒ All except Figure T
- ☐ I don't know.



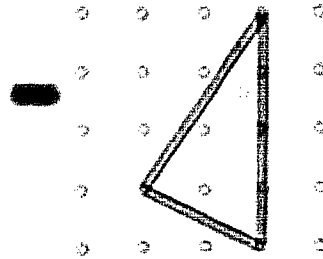
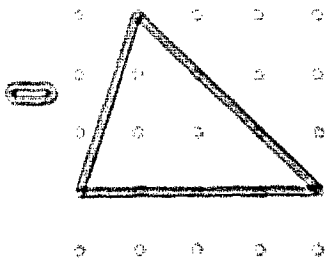
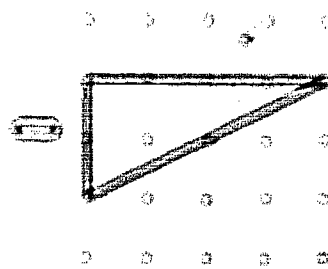
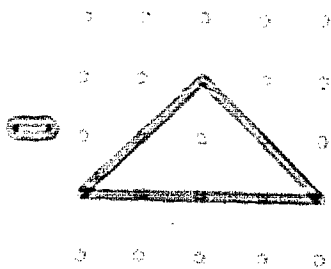
DO NOT (CONSIDER)
IT (THAT) IS NOT SO

216

215



Suppose you cut out the above triangle. On top of which triangle below would it fit exactly? Put an X on the oval beside the triangle you choose.



☐ I don't know.



DO NOT CONTINUE
UNTIL TOLD TO DO SO.



Report #: RC20432

NAEP #: 5-C20432-92D-123

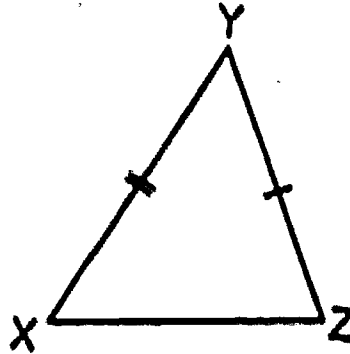
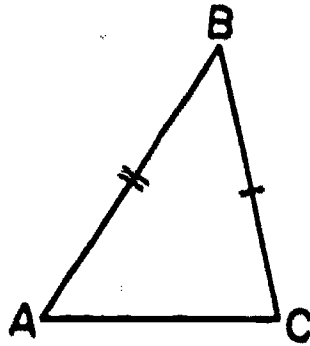
Content Objective: C. Shape, Size and Position

Process Objective: Skill in Manipulating

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:	$\frac{9}{04-27}$	$\frac{13}{08-16}$	$\frac{17}{09-28}$
Package-Exercise:			
TOTAL TIME: (in seconds)	$\frac{9}{41}$	$\frac{13}{31}$	$\frac{17}{28}$

In triangles ABC and XYZ , side \overline{AB} is congruent to side \overline{XY} , and side \overline{BC} is congruent to side \overline{YZ} . Which statement would NOT guarantee that the triangles are congruent?



- ☐ Angle A is congruent to angle X , and angle C is congruent to angle Z .
- ☐ Angle B is congruent to angle Y .
- ☒ Angle A is congruent to angle X .
- ☐ Side \overline{AC} is congruent to side \overline{XZ} .
- ☐ I don't know.

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DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RC20932

NAEP #: 5-C20932-92D-23

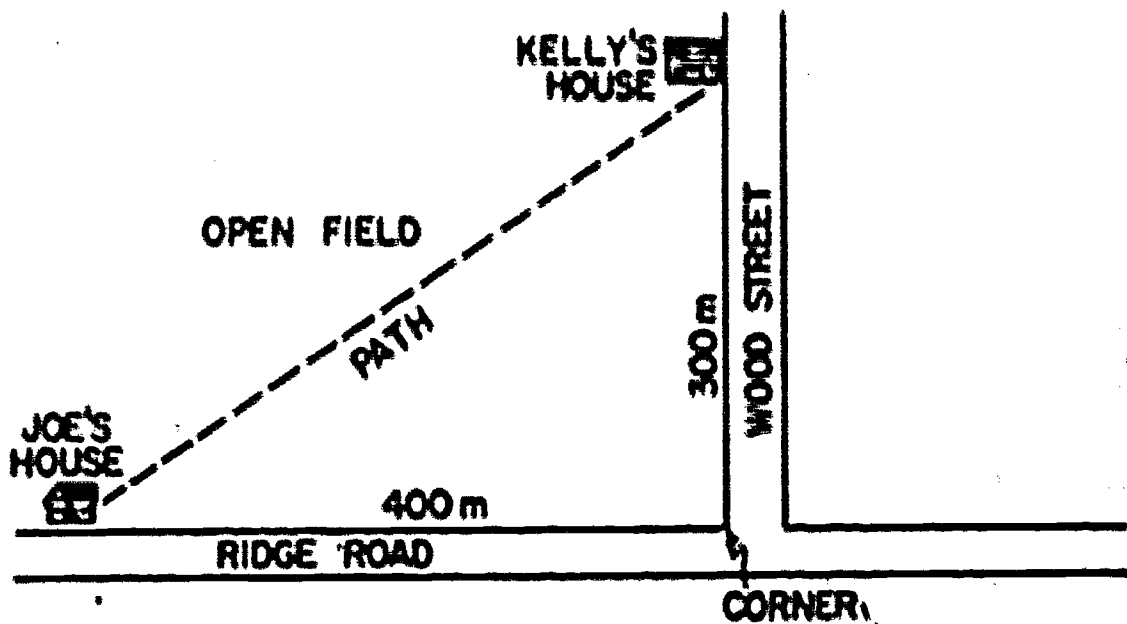
Content Objective: C. Shape, Size and Position

Process Objective: 3. Understanding

Exercise Type: Multiple-choice

Stimulus Type: Text/Tape

Overlap:	$\frac{13}{13-07}$	$\frac{17}{11-17}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{72}$	$\frac{17}{65}$



Joe's house on Ridge Road is 400 meters from the corner of Ridge Road and Wood Street. Kelly's house is on Wood Street and is 300 meters from the same corner. When Joe goes to Kelly's house, he walks through the open field. How many meters does he walk?

- ☐ 450
- ☐ 500
- ☐ 550
- ☐ 600
- ☐ I don't know.



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

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Report #: RC40542

NAEP #: 5-C40542-92D-23

Content Objective: C. Shape, Size and Position

Process Objective: Applications of Routine Problems

Exercise Type: Multiple-choice
Stimulus Type: Test/Tape

Overlap:	$\frac{13}{07-15}$	$\frac{17}{07-13}$
Package-Exercise:		

TOTAL TIME: (in seconds)	$\frac{13}{59}$	$\frac{17}{59}$
--------------------------	-----------------	-----------------

An ALTITUDE of a triangle always

- ☐ bisects an angle.
- ☐ bisects a side.
- ☒ is perpendicular to a side or its extension.
- ☐ divides the triangle into two congruent triangles.

- ☐ I don't know.



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RC41111

NAEP #: 5-C41111-92D-3

Content Objective: C. Shape, Size and Position

Process Objective: Knowledge

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:
Package-Exercise: $\frac{17}{12-23}$

TOTAL TIME: (in seconds) $\frac{17}{26}$

Construct a line perpendicular to line ℓ at point P. Use the ruler as a straightedge and the compass. Be sure to show your work.



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DO NOT CONTINUE
UNTIL TOLD TO DO SO.

223

226

ERIC
Full Text Provided by ERIC

Report #: RC60024

NAEP #: 5-260024-929-3

Content Objective: C. Shape, Size and Position

Process Objective: Skill in Manipulating

Exercise Type: Open-ended
Stimulus Type: Text/Tape

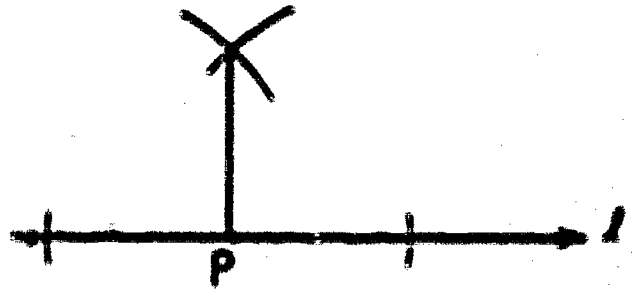
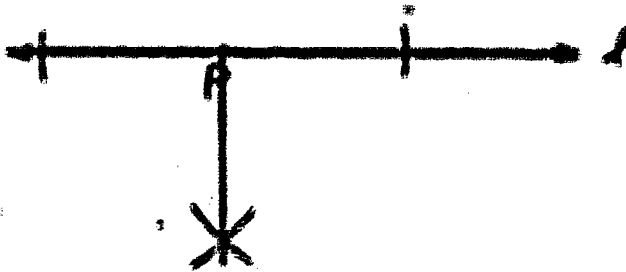
Overlap:
Package-Exercise: $\frac{17}{10-34}$

TOTAL TIME: (in seconds) $\frac{17}{61}$

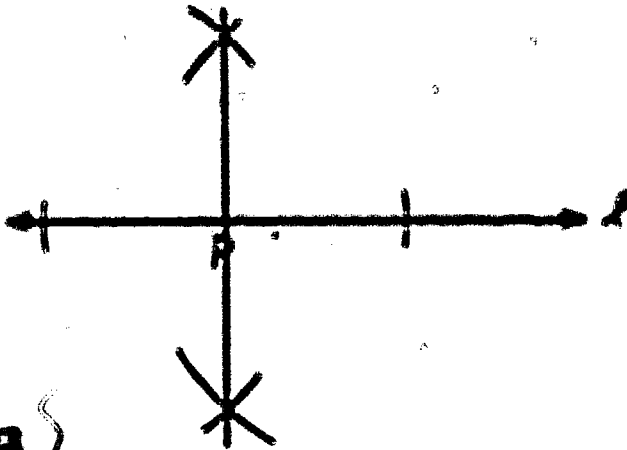
5-C6024-92D-3
SCORING GUIDE

Categories are listed below.

1 = ARCS MUST BE EQUIVALENT FROM POINT P.

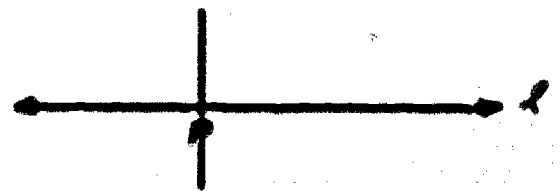
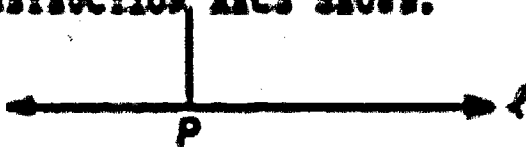


2 =



0 = OTHER

1 = DREW A LINE APPEARING PERPENDICULAR TO L AT POINT P, WITH NO CONSTRUCTION ARCS SHOWN.



2 = DREW EITHER A CIRCLE, SEMI-CIRCLES, QUARTER CIRCLES, OR OTHER PARTS WITH POINT P AS THE CENTER, OR WITH THE LINE END POINTS AS CENTERS. NO PARALLEL LINE.

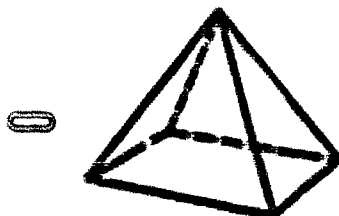
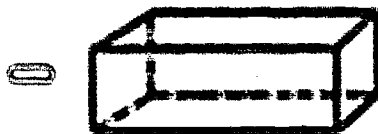
3 = CONSTRUCTED A PERPENDICULAR TO LINE L BUT NOT THROUGH POINT P. MOST LIKELY THE ARCS WILL BE CENTERED AT THE ENDS OF THE LINE SEGMENT.

7 = I DON'T KNOW.

8 = NO RESPONSE



Shown above is the shape of a face obtained by cutting one of the solids below once. Which one of the following could NOT be the solids? Fill in the oval beside the one you choose.



☐ I don't know.



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

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REPORT #: 4071224

NAME #: SC71224-23

CONTENT
OBJECTIVE: C. Shape, Size and Position

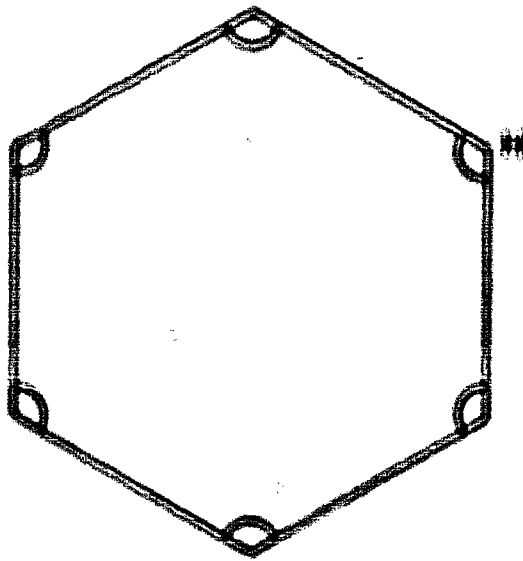
PROCESSES
OBJECTIVE: Skill in Manipulating

Exercise Type: Manipulation
Skill/Type: Drill/Type

Overlap:
Package-Exercise: $\frac{13}{23}$ $\frac{17}{27}$

TOTAL TIME: (in seconds) $\frac{13}{23}$ $\frac{17}{27}$

22230



The figure above is a regular hexagon. What is the measure of angle H?

☐ 60°

☐ 90°

☐ 115°

☐ 120°

☐ 150°

☐ I don't know.



DO NOT CONTINUE
UNTIL TOLD TO DO SO

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228

231

අගයනු ලබන අංකය : 1000000

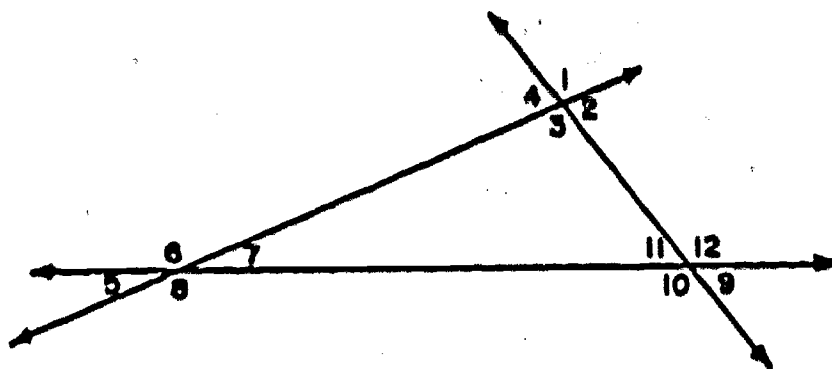
අගයනු ලබන අංකය : 1000000000

ලිපිකරණය
ලිපිකරණය : 1. ගුණය, ගුණය සහ ගුණය

ලිපිකරණය
ලිපිකරණය : ගුණය ගුණය ගුණය

ලිපිකරණය, ලිපිකරණය : ගුණය ගුණය
ලිපිකරණය, ලිපිකරණය : ගුණය ගුණය

ලිපිකරණය : ගුණය ගුණය
ලිපිකරණය : ගුණය ගුණය
ලිපිකරණය : ගුණය ගුණය



What is the sum of the measures of angles 1, 3, 5, 7, 9, 11?

- ☐ 180°
- ☐ 360°
- ☐ 720°
- ☐ Not enough information given
- ☐ I don't know.

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DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RC81143

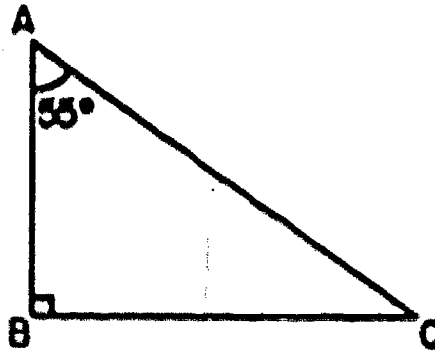
NAEP #: 5-C81143-92D-23

Content Objective: C. Shape, Size and Position

Process Objective: Applications of Routine Problems

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{08-28}$	$\frac{17}{12-31}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{53}$	$\frac{17}{42}$



ABC is a right triangle. What is the measure of $\angle ACB$?

- ☒ 35°
- ☐ 45°
- ☐ 55°
- ☐ 90°
- ☐ Not enough information given
- ☐ I don't know.

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DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RC82132

NAEP #: 5-C82132-92D-23

Content Objective: C. Shape, Size and Position

Process Objective: Applications of Routine Problems

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{10-12}$	$\frac{17}{08-06}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{31}$	$\frac{17}{25}$

A. How many pints are in one quart?

☒ 2

☐ 4

☐ 6

☐ 8

☐ I don't know.

B. How many quarts are in one gallon?

☐ 2

☒ 4

☐ 6

☐ 8

☐ I don't know.

C. How many ounces are in one pound?

☐ 10

☐ 12

☒ 16

☐ 24

☐ 32

☐ I don't know.



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

0000000000

D. How many feet are in one yard?

☒ 3

☐ 9

☐ 12

☐ 36

☐ I don't know.

E. How many inches are in one foot?

☐ 3

☐ 10

☒ 12

☐ 36

☐ I don't know.



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RD11211

NAEP #: 5-D11211-920-23

Content Objective: D. Measurement

Process Objective: Knowledge

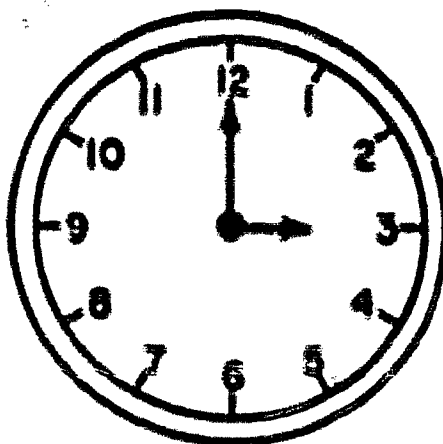
Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{07-09}$	$\frac{17}{09-13}$
Package-Exercise:		

TOTAL TIME: (in seconds)	$\frac{11}{53}$	$\frac{17}{40}$
--------------------------	-----------------	-----------------

What time is shown on each clock?

A.



☐ 12:00

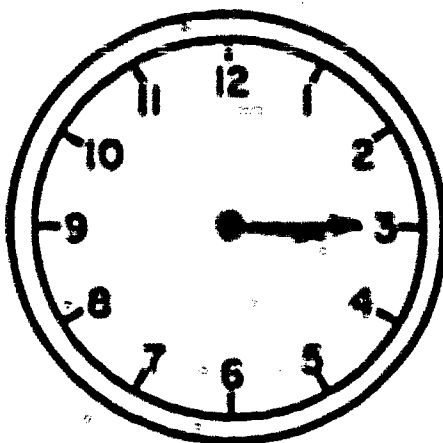
☐ 12:03

☐ 3:00

☐ 3:12

☐ I don't know.

B.



☐ 3:00

☐ 3:03

☐ 3:15

☐ 3:20

☐ I don't know.



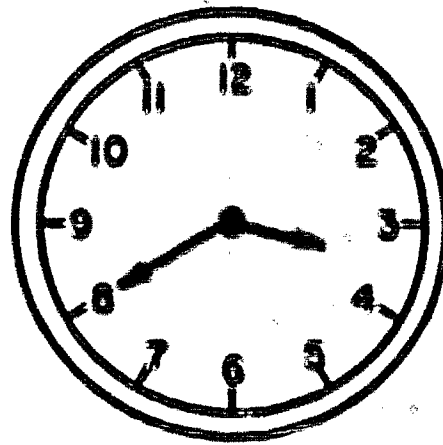
DO NOT CONTINUE
UNTIL TOLD TO DO SO.

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237

240

C.



☐ 3:20

☒ 3:40

☐ 4:00

☐ 3:20

☐ I don't know.



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

238 211

5 849 446-1001 8

Report #: 8D21422

NLEP #: 5-D21422-929-1

Content
Objective: D. Measurement

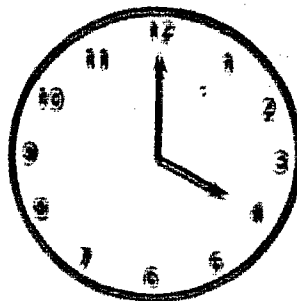
Process
Objective: Skill

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

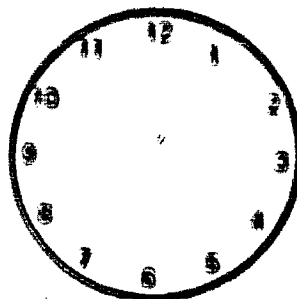
Overlap:
Package-Exercise: $\frac{2}{03-18}$

TOTAL TIME: (in seconds) $\frac{2}{31}$

212
239



Draw hands on the clock below to show how it will look one hour and ten minutes later than the time shown on the clock above.



0000000000

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DO NOT CONTINUE
UNTIL TOLD TO DO SO.

2-13

Report #: 4021722

NAEP #: 5-E-11016-4-D-1

Content Objective: D. Measurement

Process Objective: Skill

Exercise Type: Computation
Simulation Type: Port/Type

Overlap: $\frac{2}{11672}$
Package Exercise:


TOTAL TIME: (in seconds) $\frac{2}{34}$

1982-83 NO312
1977-78 NO310
1972-73 NO308

5-031722-13D-1
5-011006-1
SCORING GUIDE

Categories are listed below.

- 11 * 5:15
- 20 * 0:00
- 21 * 7:05
- 22 * 4:10 OR 7:20
- 23 * 1:10 OR 2:05
- 24 * 1:30 OR 6:05
- 25 * 12:10 OR 2:00
- 26 * ~~1:10 OR 2:10~~ 5:10 OR 7:25
- 77 * I DON'T KNOW.
- 88 * NO RESPONSE

[illegible]A black and white photograph of a standard octagonal stop sign with the word "STOP" in bold, capital letters in the center.

DO NOT CONTINUE
UNTIL TOLD TO DO SO

210

Report #: RD30122

NAEP #: 5-D30122-92D-12

Content Objective: D. Measurement

Process Objective: Skill

Exercise Type: Open-ended
Stimulus Type: Text/Tape

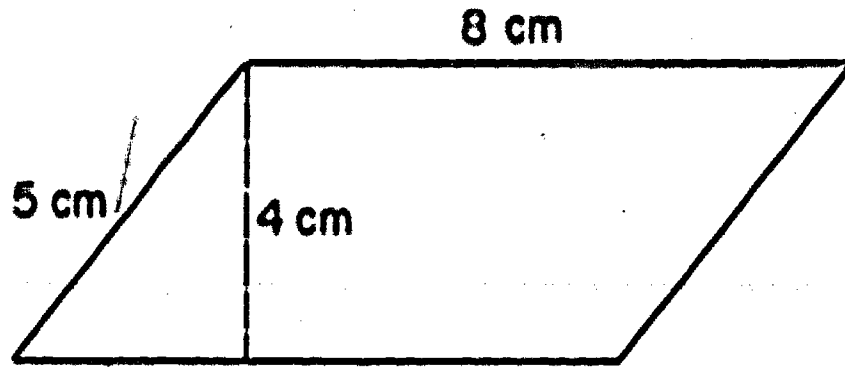
Overlap:	$\frac{9}{05-34}$	$\frac{13}{10-41}$
Package-Exercise:		

TOTAL TIME: (in seconds)	$\frac{9}{32}$	$\frac{13}{29}$
--------------------------	----------------	-----------------

5-D30122-92D-1,2
SCORING GUIDE

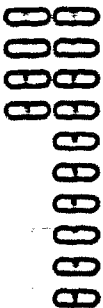
Categories are listed below.

- 11 = LINE SEGMENT 6.7 TO 7.3 CM LONG
- 20 = OTHER -- 6.4 OR ANY GEOMETRIC SHAPE
- 21 = LINE SEGMENT 6.5 TO 7.5 CM LONG OTHER THAN CATEGORY 11
- 22 = LINE SEGMENT 5.7 TO 6.3 CM LONG
- 23 = LINE SEGMENT 3.3 TO 3.7 INCLUDING 3.3 AND 3.7
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE



The dotted line is an altitude of the parallelogram. What is the area of the parallelogram?

ANSWER _____ square cm



219



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

246

Report #: RD40722

NAEP #: 5-D40722-92D-3

Content
Objective: D. Measurement

Process
Objective: Skill

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:
Package-Exercise: $\frac{17}{09-18}$

TOTAL TIME: (in seconds) $\frac{17}{37}$

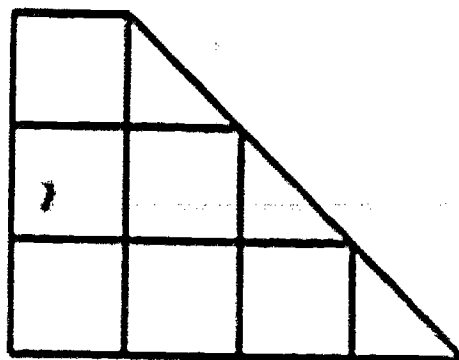
250

247

5-D40732-92D-3
SCORING GUIDE

Categories are listed below.

- 11 = 32, 32 SQUARE CM OR CM²
- 20 = OTHER
- 11 = 16
- 22 = 17
- 23 = 26
- 24 = 30
- 25 = 40
- 26 = 160
- 27 = 20
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE



What is the area of this figure?

- ☐ 6 units
- ☐ $7\frac{1}{2}$ units
- ☐ $8\frac{1}{2}$ units
- ☐ 9 units
- ☐ 12 units
- ☐ I don't know.

0000000000

252



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RD50432

NAEP #: 5-05043, -920-23

Content Objective: D. Measurement

Process Objective: Skill

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{07-13}$	$\frac{17}{09-10}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{23}$	$\frac{17}{27}$

The length of a table measured to the nearest inch is 42 inches. What does this mean about the length of the table?

- ☐ It is exactly 42 inches.
- ☐ It may be anywhere between 41 inches and 43 inches.
- ☒ It may be anywhere between $41\frac{1}{2}$ inches and $42\frac{1}{2}$ inches.
- ☐ I don't know.

0000000000

254



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

251

Report #: RD10232

ALP #: 5-D70232-92D-3

Content Objective: D. Measurement

Process Objective: Understanding

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap: $\frac{17}{11-16}$
Package-Exercise:

TOTAL TIME: (in seconds) $\frac{17}{39}$

Mary plans to have a party on Thursday, three weeks from December 2nd. On what DATE does she plan to have it?

DECEMBER						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

ANSWER _____

0000000000

0000000000

0000000000
0000000000

256

255



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: R990141

NAEP #: 5-A21013-43D-123

Content Objective: D. Measurement

Process Objective: Skill:

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:	$\frac{9}{09-12}$	$\frac{13}{07-09}$	$\frac{17}{10-01}$
Package-Exercise:			
TOTAL TIME: (in seconds)	$\frac{9}{34}$	$\frac{13}{35}$	$\frac{17}{35}$

5-090141-43D-1,2,3
 5-421013-1,2,3
 SCORING GUIDE

Categories are listed below.

- 11 = DECEMBER 12TH, 12TH OF 12
- 20 = OTHER
- 31 = THURSDAY
- 22 = DECEMBER 14, 14TH OF 14
- 23 = DECEMBER 16, 16TH OF 16
- 24 = NOVEMBER 11
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

ANSWER

0000000000



STOP

DO NOT CONTINUE
UNTIL TOLD TO DO SO.

259



Import #: 3101242

Unit #: 3101242-001-0

Manufacturer: 1. Manufacturer

Part Number: 3101242-001-0

Extraction Date: 1/1/2000
Extraction Date: 1/1/2000

Overlays: 27
Extraction Date: 1/1/2000

Final Time: (10 seconds) 27
31

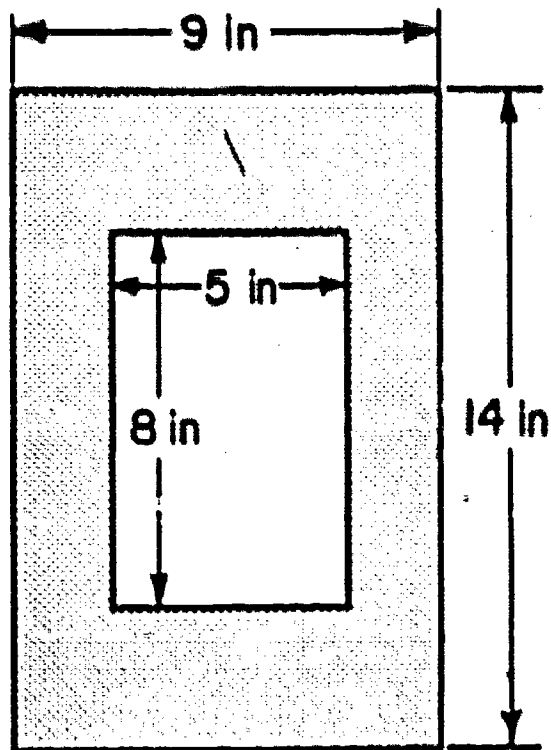
260

257

5-D91242-92D-3
SCORING GUIDE

Categories are listed below.

- 11 = 27 POUNDS, 27 LBS. OR 27
- 20 = OTHER
- 21 = 270 OR 2700 WITH OR WITHOUT UNITS (CATEGORY 26 TAKES PRECEDENCE)
- 22 = 10800 WITH OR WITHOUT UNITS OR ATTEMPTED 120×90
- 23 = 190 WITH OR WITHOUT UNITS OR ATTEMPTED $400 - (120 + 90)$
- 24 = 210 WITH OR WITHOUT UNITS OR ATTEMPTED $120 + 90$
- 25 = 610 WITH OR WITHOUT UNITS OR ATTEMPTED $400 + 120 + 90$
- 26 = 27 WITH WRONG UNIT OR ATTEMPTED (120×90) DIVIDED BY 400 OR (12×9) DIVIDED BY 4
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE



What is the area of the shaded part of the figure?

ANSWER _____ square in.

0000000000

0000000000



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

262

259

Report #: RD91342

NAEP #: 5-D91342-92D-23

Content
Objective: D. Measurement

Process
Objective: . Applications of Routine Problems

Exercise Type: Open-ended
Stimulus Type: Text/Tape

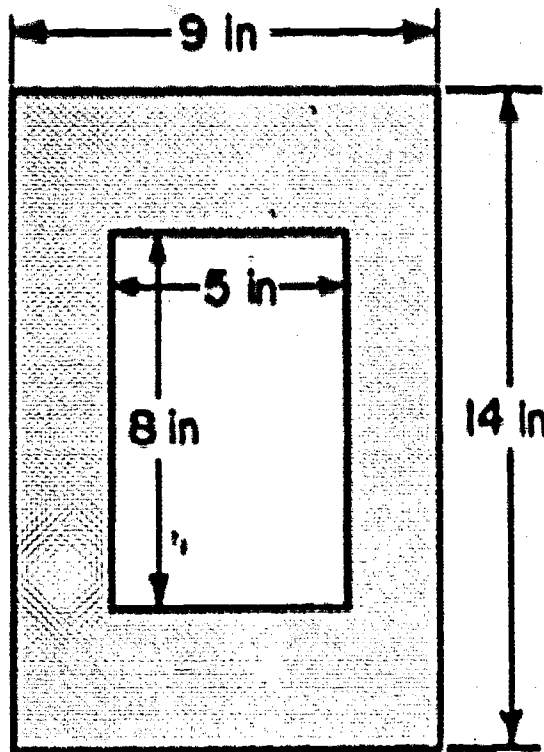
Overlap:	$\frac{13}{09-17}$	$\frac{17}{07-23}$
Package-Exercise:		

TOTAL TIME: (in seconds)	$\frac{13}{44}$	$\frac{17}{43}$
--------------------------	-----------------	-----------------

5-D91342-92D-2,3
SCORING GUIDE

Categories are listed below.

- 11 = 86 OR 86 SQ. IN.
- 20 = OTHER
- 21 = 126 OR ATTEMPTED 9×14
- 22 = 40 OR ATTEMPTED 5×8
- 23 = 166 OR ATTEMPTED $(9 \times 14) + (5 \times 8)$
- 24 = 10, 20 OR ATTEMPTED TO FIND DIFFERENCE OF PERIMETERS OR SEMIPERIMETERS
- 25 = 36, 72 OR ATTEMPTED TO FIND SUM OF PERIMETERS OR SEMIPERIMETERS
- 26 = 24 OR ATTEMPTED 4×6 OR $(9 - 5) \times (14 - 8)$
- 27 = 46, 23 OR ATTEMPTED TO FIND PERIMETER OR SEMIPERIMETER OF LARGE RECTANGLE; 13, 26 OR ATTEMPTED TO FIND PERIMETER OR SEMIPERIMETER OF SMALL RECTANGLE
- 28 = 5040 OR ATTEMPTED $9 \times 14 \times 5 \times 8$
- 29 = ATTEMPTED $(9 \times 14) - (5 \times 8)$ WITH NO OR WRONG ANSWER
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE



What is the area of the shaded part of the figure?

ANSWER _____ square in.

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DO NOT CONTINUE
UNTIL TOLD TO DO SO.

265

262

Report #: RD91302K

NAEP #: 5-D91302K-92D-23

Content
Objective: F. Technology

Process
Objective: Hand Held Calculator

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{11-28}$	$\frac{17}{14-29}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{43}$	$\frac{17}{43}$

5-D91342K92D-23
SCORING GUIDE

Categories are listed below.

- 11 = 86 OR 86 SQ. IN.
- 20 = OTHER
- 21 = 126 OR ATTEMPTED 9×14
- 22 = 40 OR ATTEMPTED 5×8
- 23 = 166 OR ATTEMPTED $(9 \times 14) + (5 \times 8)$
- 24 = 10, 20 OR ATTEMPTED TO FIND DIFFERENCE OF PERIMETERS OR SEMIPERIMETERS
- 25 = 36, 72 OR ATTEMPTED TO FIND SUM OF PERIMETERS OR SEMIPERIMETERS
- 26 = 24 OR ATTEMPTED 4×6 OR $(9 - 5) \times (14 - 8)$
- 27 = 46, 23 OR ATTEMPTED TO FIND PERIMETER OR SEMIPERIMETER OF LARGE RECTANGLE; 13, 26 OR ATTEMPTED TO FIND PERIMETER OR SEMIPERIMETER OF SMALL RECTANGLE
- 28 = 5040 OR ATTEMPTED $9 \times 14 \times 5 \times 8$
- 29 = ATTEMPTED $(9 \times 14) - (5 \times 8)$ WITH NO OR WRONG ANSWER
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

How many pint-sized containers could be filled from a half-gallon carton of milk?

ANSWER _____

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0000000000

268

265



DO NOT CONTINUE
UNTIL TOLD TO DO SO

Report #: RD92141

NAEP #: 5-E15003-A30-23

Content Objective: D. Measurement

Process Objective: Skill

Exercise Type: Open-ended
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{10-05}$	$\frac{17}{13-37}$
Package-Exercise:		
TOTAL TIME: (in seconds)	$\frac{13}{36}$	$\frac{17}{31}$

1981-82	T1005	81337
1977-78	T0804	80203
1972-73	T0808	80208

5-D92141-43D-2,3
5-E15003-2,3
SCORING GUIDE

Categories are listed below.

- 11 = 4, 4 CONTAINERS OR 4 PINTS
- 20 = OTHER: 2, 8 OR 16 WITH WRONG UNIT
- 21 = 2, 2 CONTAINERS OR 2 PINTS
- 22 = 8, 8 CONTAINERS OR 8 PINTS
- 23 = 16, 16 CONTAINERS OR 16 PINTS
- 24 = 4 WITH WRONG UNIT
- 77 = I DON'T KNOW.
- 88 = NO RESPONSE

Five people belong to the Tigers Club. No person may hold two offices. How many ways can the club elect a president and secretary?

☐ 5

☐ 9

☐ 10

☐ 15

☒ 20

☐ I don't know.

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271

258



DO NOT CONTINUE
UNTIL TOLD TO DO SO

44-38861-1034

5-110513-020-23

[illegible]

APPROXIMATE OF HOUSEHOLD PRODUCTION

THE FIRST CHURCH

11 25 4 2

1954年5月

43

අනුපාත: 1:2 අනුපාත: 1:2

අනුපාත: 1:2 අනුපාත: 1:2

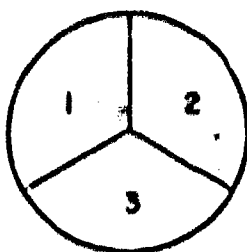
අනුපාත: 1:2 අනුපාත: 1:2

අනුපාත: 1:2 අනුපාත: 1:2

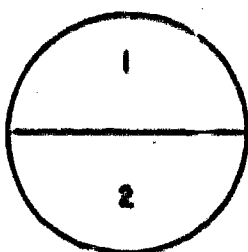
අනුපාත: 1:2 අනුපාත: 1:2

අනුපාත: 1:2 අනුපාත: 1:2

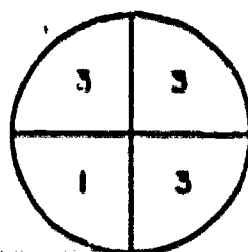
අනුපාත: 1:2 අනුපාත: 1:2



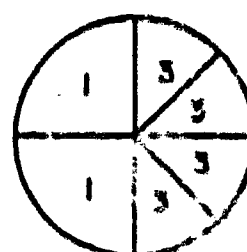
P



Q



R



S

A. You WIN the game if 3 is spun. Which spinner would you choose?

☐ P

☐ Q

☒ R

☐ S

☐ I don't know.

B. Suppose you LOSE the game if 3 is spun. Which spinner would you choose?

☐ P

☒ Q

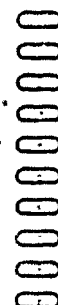
☐ R

☐ S

☐ I don't know.



DO NOT CONTINUE
UNTIL TOLD TO DO SO.



C. Suppose you **LOSE** the game if 1 is spun. Which spinner would you choose?

☐ P

☐ Q

☐ R

☐ S

☐ I don't know.



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: RE11532

NAEP #: 5-E11532-92D-12

Content
Objective: E. Probability and Statistics

Process
Objective: Understanding

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:	$\frac{9}{02-16}$	$\frac{13}{08-38}$
Package-Exercise:		

TOTAL TIME: (in seconds)	$\frac{9}{101}$	$\frac{13}{82}$
--------------------------	-----------------	-----------------

Suppose you are playing a game. If you toss a coin and it lands tails you win \$3, but if it lands heads you lose \$2.

A. If you toss the coin just one time you will

- ☐ probably win money.
- ☐ be equally likely to win or lose money.
- ☐ probably lose money.
- ☐ I don't know.

B. If you toss the coin 100 times you will

- ☐ probably win more money than you lose.
- ☐ be equally likely to win or lose money.
- ☐ probably lose more money than you win.
- ☐ I don't know.

278



DO NOT CONTINUE
UNTIL TOLD TO DO SO

275

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Report #: EE 12646

NAEP #: 5-E 12646-92D-3)

Content
Objective: E. Probability and Statistics

Process
Objective: Applications of Reasoning and Judgment

Exercise Type: Multiple-choice
Stimulus Type: Text/Tape

Overlap:	$\frac{13}{07-39}$	$\frac{17}{08-09}$
Package-Exercise:		

TOTAL TIME: (in seconds)	$\frac{13}{69}$	$\frac{17}{67}$
--------------------------	-----------------	-----------------

279

276

Dora traveled 20 miles in four hours. What was her average speed in miles per hour?

- ☐ 4 mph
- ☐ 5 mph
- ☐ 16 mph
- ☐ 20 mph
- ☐ 24 mph
- ☐ I don't know.

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250.



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

Report #: AE21041

NAEP #: 5-E21041-92D-123

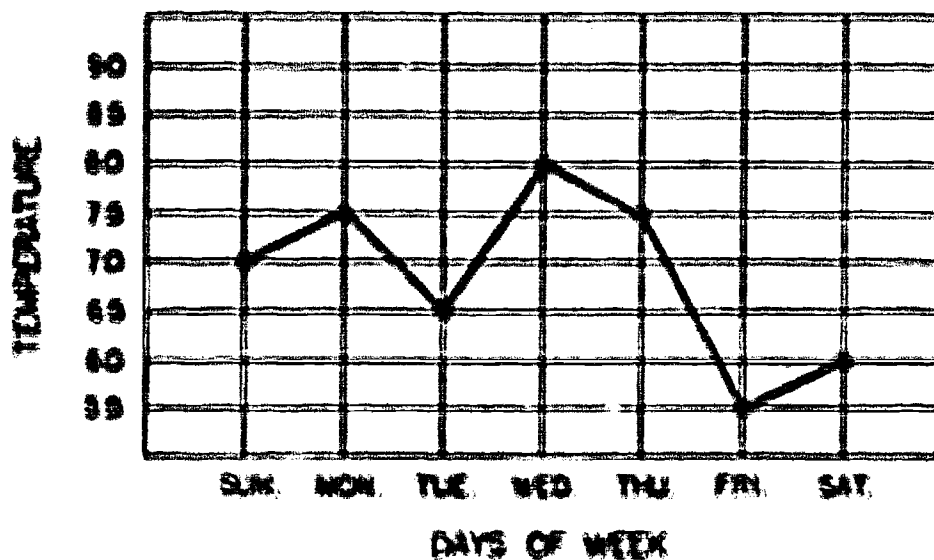
Content Objective: E. Probability and Statistics

Process Objective: Applications of Real-World Problems

Exercise Type: Multiple-Choice
Stimulus: Test/Item

Overlap:	$\frac{9}{07-20}$	$\frac{13}{07-21}$	$\frac{17}{09-04}$
Package-Exercise:			
TOTAL TIME: (in seconds)	$\frac{9}{30}$	$\frac{13}{22}$	$\frac{17}{22}$

DAILY NOON TEMPERATURES FOR ONE WEEK



4. Which day was the warmest at noon?

- ☐ Sunday
- ☐ Monday
- ☐ Tuesday
- ☒ Wednesday
- ☐ Thursday
- ☐ Friday
- ☐ Saturday

don't know.

0000000000

282



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

279

(Continued)

B. Which two days had the same moon temperature?

- ☐ Tuesday and Friday
- ☒ Monday and Thursday
- ☐ Monday and Wednesday
- ☐ Sunday and Saturday
- ☐ Wednesday and Thursday
- ☐ I don't know.

C. How many days was the moon temperature 70° or above?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☒ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ I don't know.



Report #: AE30323

ALP #: S-E 30123-929-123

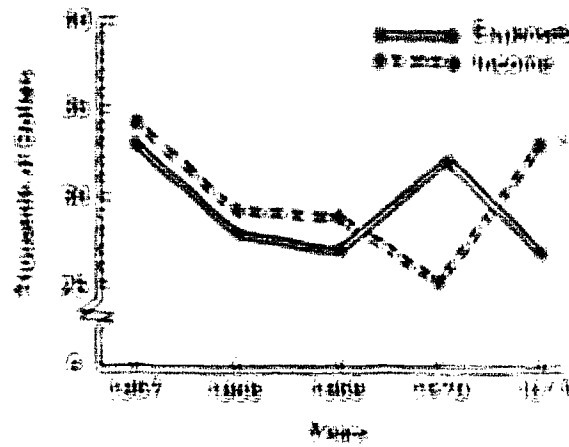
Course:
Objective: E. Probability and Statistics

Process:
Objective: Skill

Exercise Type: Multiple-choice
Stimulus Type: Text/Text

Overlap:	$\frac{9}{61-61}$	$\frac{12}{69-61}$	$\frac{17}{10-11}$
Package-Exercise:			
TOTAL TIME: (in seconds)	$\frac{9}{61}$	$\frac{12}{69}$	$\frac{17}{10}$

REVENUE AND EXPENSES OF MICRO, CO. 1967-1974



According to the graph, in which year did the Micro Company make the largest dollar amount of profit?

- ☐ 1967
- ☐ 1968
- ☐ 1969
- ☐ 1970
- ☐ 1971
- ☐ I don't know



DO NOT CONTINUE
UNTIL TOLD TO DO SO.

10-10-10 10:10

10-10-10 10:10

10-10-10 10:10

10-10-10 10:10

10-10-10 10:10

10-10-10 10:10

10-10-10 10:10

APPENDIX C

**National and Model Grade
P-Values for Correct Response
to Cognitive Exercises**

1981-82

Assessment

297

281

**TABLES OF COMPARISON BETWEEN THE NATIONAL AND LOCAL GRADE 4 AND
GRADE 5 MATHEMATICS STANDARDS**

	PAGE 2		PAGE 3		PAGE 4	
	Standard	Grade 4	Standard	Grade 5	Standard	Grade 5
4.NF.A.1-2			4.NF.A.1-2		4.NF.A.1-2	
4.NF.A.3-4			4.NF.A.3-4		4.NF.A.3-4	
4.NF.B.1-2			4.NF.B.1-2		4.NF.B.1-2	
4.NF.B.3-4			4.NF.B.3-4		4.NF.B.3-4	
4.NF.C.1-2			4.NF.C.1-2		4.NF.C.1-2	
4.NF.C.3-4			4.NF.C.3-4		4.NF.C.3-4	
4.NF.D.1-2			4.NF.D.1-2		4.NF.D.1-2	
4.NF.D.3-4			4.NF.D.3-4		4.NF.D.3-4	
4.NF.E.1-2			4.NF.E.1-2		4.NF.E.1-2	
4.NF.E.3-4			4.NF.E.3-4		4.NF.E.3-4	
4.NF.F.1-2			4.NF.F.1-2		4.NF.F.1-2	
4.NF.F.3-4			4.NF.F.3-4		4.NF.F.3-4	
4.NF.G.1-2			4.NF.G.1-2		4.NF.G.1-2	
4.NF.G.3-4			4.NF.G.3-4		4.NF.G.3-4	
4.NF.H.1-2			4.NF.H.1-2		4.NF.H.1-2	
4.NF.H.3-4			4.NF.H.3-4		4.NF.H.3-4	
4.NF.I.1-2			4.NF.I.1-2		4.NF.I.1-2	
4.NF.I.3-4			4.NF.I.3-4		4.NF.I.3-4	
4.NF.J.1-2			4.NF.J.1-2		4.NF.J.1-2	
4.NF.J.3-4			4.NF.J.3-4		4.NF.J.3-4	
4.NF.K.1-2			4.NF.K.1-2		4.NF.K.1-2	
4.NF.K.3-4			4.NF.K.3-4		4.NF.K.3-4	
4.NF.L.1-2			4.NF.L.1-2		4.NF.L.1-2	
4.NF.L.3-4			4.NF.L.3-4		4.NF.L.3-4	
4.NF.M.1-2			4.NF.M.1-2		4.NF.M.1-2	
4.NF.M.3-4			4.NF.M.3-4		4.NF.M.3-4	
4.NF.N.1-2			4.NF.N.1-2		4.NF.N.1-2	
4.NF.N.3-4			4.NF.N.3-4		4.NF.N.3-4	
4.NF.O.1-2			4.NF.O.1-2		4.NF.O.1-2	
4.NF.O.3-4			4.NF.O.3-4		4.NF.O.3-4	
4.NF.P.1-2			4.NF.P.1-2		4.NF.P.1-2	
4.NF.P.3-4			4.NF.P.3-4		4.NF.P.3-4	
4.NF.Q.1-2			4.NF.Q.1-2		4.NF.Q.1-2	
4.NF.Q.3-4			4.NF.Q.3-4		4.NF.Q.3-4	
4.NF.R.1-2			4.NF.R.1-2		4.NF.R.1-2	
4.NF.R.3-4			4.NF.R.3-4		4.NF.R.3-4	
4.NF.S.1-2			4.NF.S.1-2		4.NF.S.1-2	
4.NF.S.3-4			4.NF.S.3-4		4.NF.S.3-4	
4.NF.T.1-2			4.NF.T.1-2		4.NF.T.1-2	
4.NF.T.3-4			4.NF.T.3-4		4.NF.T.3-4	
4.NF.U.1-2			4.NF.U.1-2		4.NF.U.1-2	
4.NF.U.3-4			4.NF.U.3-4		4.NF.U.3-4	
4.NF.V.1-2			4.NF.V.1-2		4.NF.V.1-2	
4.NF.V.3-4			4.NF.V.3-4		4.NF.V.3-4	
4.NF.W.1-2			4.NF.W.1-2		4.NF.W.1-2	
4.NF.W.3-4			4.NF.W.3-4		4.NF.W.3-4	
4.NF.X.1-2			4.NF.X.1-2		4.NF.X.1-2	
4.NF.X.3-4			4.NF.X.3-4		4.NF.X.3-4	
4.NF.Y.1-2			4.NF.Y.1-2		4.NF.Y.1-2	
4.NF.Y.3-4			4.NF.Y.3-4		4.NF.Y.3-4	
4.NF.Z.1-2			4.NF.Z.1-2		4.NF.Z.1-2	
4.NF.Z.3-4			4.NF.Z.3-4		4.NF.Z.3-4	

PERCENT OF CORRECT RESPONSES FOR NATION AND MODAL GRADE BY AGE
1981-82 MATHEMATICS ASSESSMENT (Cont'd.)

		Age 9		Age 13		Age 17	
		National	Grade 4	National	Grade 8	National	Grade 11
RA42241-2,3				17.2	18.4	29.1	29.1
RA42832-2,3	A			73.0	79.8	89.4	90.4
	B			66.5	76.5	86.5	88.2
	C			56.8	67.4	80.3	82.1
RA44621-2	A			41.7	47.6		
	B			28.2	31.5		
	C			25.1	27.7		
RA46232-2,3				70.1	72.9	81.4	83.0
RA47344-2,3				14.0	18.0	44.0	46.8
RA47344K2,3				14.4	17.5	51.9	54.8
RA47711-1	A	70.0	81.8				
	B	49.2	64.9				
	C	78.9	90.6				
	D	63.3	78.7				
	E	79.1	89.1				
	F	55.6	71.8				
RA47832-1		73.4	80.9				
RA48221-2				23.9	28.4		
RA48221K2				7.1	8.8		
RA51932-2,3				62.2	68.5	82.3	86.5
RA52132-2,3				11.2	13.4	27.2	28.9
RA61132-2,3	A			58.0	62.9	77.7	80.6
	B			43.6	47.5	66.6	70.1
	C			39.5	44.7	65.8	68.6
	D			26.7	28.1	46.8	49.0
RA70443-1		35.0	43.2				
RA71443-2,3				30.7	34.4	43.6	44.3
RA72043-1,2		57.1	59.2	66.7	69.3		
RA80944-1,2		19.1	19.7	56.7	61.8		
RA81042-2,3				36.2	42.8	60.0	65.3
RA90144-3	A					85.9	87.5
	B					93.8	94.6
RA91944-3						57.2	59.4
RA94123-2,3	A			52.1	59.3	75.0	79.8
	B			57.1	64.2	77.5	81.1
	C			6.5	7.8	21.1	23.0
	D			53.8	60.7	76.0	80.4
	E			52.7	59.5	74.4	78.3
RB10211-3						50.6	54.4
RB22325-3						24.8	28.2
RB23025-2,3				62.2	69.2	80.9	84.4
RB25142-3						5.7	5.7
RB25625-2				54.1	60.7		
RB30125-3	A					54.2	58.9
	B					19.5	21.6
RB40847-2				26.1	29.2		
RB40932-3						27.9	29.8

PERCENT OF CORRECT RESPONSES FOR NATION AND MODAL GRADE BY AGE
1981-82 MATHEMATICS ASSESSMENT (cont'd.)

		Age 9..		Age 13		Age 17	
		National	Grade 4	National	Grade 8	National	Grade 11
RB41832-3						44.4	47.3
RB51223-3						22.7	25.4
RB70246-2	A			77.8	79.1		
	B			93.0	94.4		
RC10411-2	A			46.0	50.0		
	B			53.8	57.3		
RC12611-1		48.5	54.3				
RC20432-1,2,3		58.0	62.9	82.2	83.7	82.2	84.2
RC20932-2,3				9.4	9.8	22.4	24.4
RC40542-2,3				20.0	21.8	39.0	41.1
RC41111-3						36.9	37.3
RC60824-3						16.3	19.0
RC71224-2,3				49.5	53.8	66.5	68.3
RC80442-2,3				14.6	16.8	25.5	27.3
RC81143-2,3				20.5	18.8	27.7	28.2
RC82132-2,3				9.6	10.3	43.6	47.4
RD11211-2,3	A			47.2	49.1	49.8	51.4
	B			59.6	63.3	73.8	74.9
	C			61.7	67.5	71.1	73.3
	D			58.6	62.1	66.4	69.0
	E			84.2	87.7	90.3	91.9
RD21422-1	A	94.3	95.9				
	B	90.1	94.6				
	C	77.0	83.0				
RD21722-1		40.3	46.5				
RD30122-1,2		63.7	65.6	74.5	78.2		
RD40722-3						19.2	20.5
RD50432-2,3				81.8	85.2	84.8	86.9
RD70232-3						59.3	61.8
RD90141-1,2,3		35.6	41.2	78.6	82.6	89.0	91.4
RD91242-3						22.9	25.3
RD91342-2,3				9.8	12.1	35.6	37.5
RD91342K2,3				8.2	10.7	36.0	39.2
RD92141-2,3				38.2	38.5	41.3	42.5
RE10543-2,3				4.3	4.4	11.8	12.8
RE11246-1,2		49.5	53.3	81.0	85.2		
RE11532-1,2	A	24.0	26.8	64.7	69.2		
	B	56.4	59.8	84.0	86.9		
	C	38.5	41.8	74.5	79.1		
RE12646-2,3	A			90.1	92.3	91.3	91.8
	B			24.9	23.2	29.2	30.6
RE21041-1,2,3		24.9	30.2	75.5	80.4	80.0	82.7
RE30323-1,2,3A		75.9	83.8	95.5	98.1	98.3	98.6
	B	68.9	77.4	93.5	96.6	96.5	97.0
	C	41.6	49.4	80.7	85.6	90.8	92.7
RE32723-3						43.4	44.1